

Chapter 6

The Latino Student-Teacher Gap in Immigrant Gateways: Structural Constraints and Policy Solutions

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Between 1990 and 2000, the Latino population increased by approximately 10 million people, accounting for 38% of the nation's overall population growth during the decade. This new demographic pressure has meant an influx of diverse and relatively young migrants and families, who are confronting public institutions not accustomed to serving them. The public school system provides a good example of these demographic shifts and pressures. Currently, Latino children account for about one in six school-aged children (NCES 2002), and one in four of the immigrant children (Fix, Passel & Ruiz de Velasco 2004). This rapid influx of Latino students has not been met with a concurrent increase in Latino teachers, however. Indeed, while American students are becoming more racially, linguistically and ethnically diverse, diversity among the teaching force is decreasing. Teachers continue to be predominantly Anglo, female, monolingual and middle class (Kirby, Berends, and Naftel 1999; Rong and Preissle 1998; Urban Teacher Challenge 2000). Moreover, despite targeted recruitment efforts, minority teachers constituted less than 10% of the teaching force in 2000 (Cochran-Smith 2000), down from roughly 15% in 1994 (Goodwin et al. 1997).

This gap between Latino students and Latino teachers is significant for a number of reasons. First, most studies report that the presence of racial and ethnic minorities positively affects school policies and institutional practices that affect minority students (National Collaborative on Diversity in the Teaching Force 2004; Urban Teacher Collaborative 2000). Second, other research finds that Latino and other minority teachers and administrators serve as cultural brokers between school and home environments, and thereby foster more supportive relations and stronger ties (Goodwin 2002; Lomotey 1989). Finally, evidence suggests that the smaller the gap between Latino teachers and students, the greater the likelihood of student academic success (Polinard, Wrinkle and Meier 1995).

Given the importance of Latino teachers for the schooling and educational outcomes of Latino students, we feel it is important to identify where the problem is most severe while also developing a better understanding of how various *institutional and contextual factors* influence the gap between these students and teachers. Thus, this chapter is motivated by two research questions. First, how big is the Latino student-teacher gap and does it vary according to the social and political characteristics of the local context? Second, are the governance and organizational structures within districts tied to Latino teacher recruitment and retention efforts, and if so, which structures and recruitment practices are most effective?

Latino Teacher Supply and Demand: The Spatial Context

The national call to address the minority teacher shortage came onto the public agenda as early as 1996, following concerns of a more general shortage of teachers across the United States (Kirby, Berends and Naftel 1999; Urban Teacher Challenge 2000). Studies of the decline cite numerous culprits, including age of the population, educational attainment and resources (Jorgenson 2001; National Collaborative on Diversity in Teaching 2004). Ironically, in an age where there are more minorities enrolled in college, fewer are pursuing a degree in education as access to more resources provides for new job opportunities (Darling-Hammond et al, 1987; Kirby & Hudson 1993).

Latinos seeking teaching jobs are further constrained by language, nativity and citizenship issues, and thus while a substantial adult population is part of the answer to the teaching shortage, it masks the larger issue of generating a pool of eligible and able Latinos who are interested in teaching careers. We posit that structural constraints, which affect levels of social and political incorporation, influence the probability of Latinos entering the teaching force and thus the supply of Latino teachers and that regional differences in immigration and the

distribution of social services and political structure mean that this gap between Latino teachers and students manifests itself differently according to location. As Figures 1 and 2 illustrate, there are stark differences in the distribution and growth of the Latino population across the American states. Relying partly on Singer's (2004) conceptualization of immigrant "gateways," we categorize major metropolitan areas into three types of destinations in order to explore how regional differences in immigration patterns, experiences with Latino native and foreign born populations, and the impact of these factors on social structures, political institutions and minority representation contribute to the Latino teacher-student gap.ⁱ

** Insert Figures 1 and 2 about here **

Continuous Gateways have been the entry point for immigrants since the beginning of the 20th century and continue to be the first destination for many immigrants. They are predominantly racially heterogeneous cities in the Northeast and Midwest, and include sizeable immigrant populations from Latin America, Eastern Europe and Asia (U.S. Census 2001). While these cities have struggled to accommodate new immigrants, their long history with immigrant populations place continuous gateways at an advantage for providing social services to new immigrants and assimilating them into American life (Judd & Swanstrom 2006). In addition Continuous Gateway cities are characterized by governing arrangements, namely district elections, the mayor-council form of government, and larger council sizes, that are associated with greater participation and representation among minority groups. As later immigrants in these cities, Latinos have benefited from these arrangements and gained political representation through the actions of previous generations (NALEO 2001).

Post World War II Gateways became attractive immigrant destinations after the passage of the Immigration and Nationality Amendments of 1965, and include cities in California,

Florida and Texas. The rapid influx of immigrants from predominantly Latin American and Asian countries caught many Post WWII gateway cities without sufficient infrastructure to provide social services to this new population (Judd and Swanstrom 2006). The implementation of a number of anti-immigration policies, such as the 1996 Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), the Antiterrorism and Effective Death Penalty Act and the Illegal Immigration Reform and Immigrant Responsibility Act, scaled back the rights of legal and illegal immigrants, made it easier to deport, remove, or bar immigrants from the US, and paved the way for additional anti-immigration policies, typically through ballot initiatives. Finally, unlike the Continuous Gateways, Post WWII Gateways are characterized by reform-style government, which are characterized by nonpartisan, at-large electoral structures, council-manager or commission forms of government, and smaller city councils, which tend to weaken minority voting blocs and discourage minority and immigrant participation (Banfield and Wilson 1963; Karnig and Welch 1982). In sum, compared to the Continuous Gateways, Latinos in Post WWII Gateways have found themselves in cities unaccustomed to immigration, ill equipped to deal with a large influx of new, foreign-born residents, and less likely to accommodate minority interests in local politics.

New Destinations experienced tremendous growth only in the last decade or two, and the majority of the new foreign-born population has come from Mexico (Chapa & de la Rosa 2004).ⁱⁱ These metropolitan areas have not only been unaccustomed to immigration, but the influx of young, mainly non-English proficient Latinos has also created a shift in the traditional black/white racial dynamics of many of these cities. Many New Destination cities have reformed governments that make Latino political incorporation more arduous. Finally, anti-immigration sentiments originally espoused in Post WWII Gateways are finding themselves on the policy

agenda in North Carolina, Georgia and Arkansas (Southern Poverty Law Center 2005). Thus, compared to Continuous and Post WWII Gateways, Latinos in New Destinations are the most disadvantaged in terms of social services and political incorporation.

In addition to immigrant gateways, we also consider how settlement patterns and social and institutional context of *Historical Destinations*, which include border areas with traditionally large Latino populations, but low levels of foreign immigration, influences the Latino student-teacher gap. Because Latinos (Mexicans) lived in Arizona, California, Colorado, New Mexico and Texas prior to annexation by the United States, they cannot be considered “immigrants.” And, unlike other destinations and gateways, these cities comprise the “heartland” of second and third-generation Latinos, most equipped to handle Latino issues socially and politically. Indeed, of the 4,050 Latino elected officials in the U.S. in 2001, 3,623 (89.5 percent) are in the five states listed above (NALEO 2001).

In sum, demographic shifts and differential immigration patterns have resulted in very different levels of Latino social and political incorporation across regions and immigrant gateways. In general, we expect that *compared to Historical Destinations*, all immigrant gateways will have more difficulty addressing the Latino teacher-student gap. Moreover, as we discuss below, we expect variation within gateway types due to differences in migration patterns, social structures, political institutions and minority representation that pose greater structural constraints in some gateway types than others.

Remedying the Gap: Political and Policy Solutions

The proportion of Latino teachers in the U.S. is declining and is explained in part by demographic features of the Latino population (age, nativity, citizenship, educational attainment). However, generating a pool of eligible Latino teachers requires more than a large

adult population base. It must also involve overcoming the structural constraints, which affect levels of social and political incorporation. political and governing arrangements and policy changes represent two means by which districts can begin remedying this Latino teacher-student gap.

A. Political and Governing Arrangements

Research on minority politics suggests that the composition of governing bodies plays an important role in both the agenda setting and implementation stages of the policy process. One area where *minority representation* has been found to have an especially large impact is on public sector hiring policies (Mladenka 1989; Stein 1986). In the domain of schools, extant research has demonstrated that increases in the representation of Latinos on school boards are associated with greater Latino representation in teaching and administrative positions (Leal, Meier & Martinez-Ebers 2004; Polinard et al. 1995). Not only are school boards responsible for hiring superintendents, but they also have the capacity to enact formal policies and exert informal pressure on higher-level school administrators when it comes to hiring decisions at lower administrative levels (Stewart et al. 1989:295-6). School administrators in turn, play an important role in the hiring of teachers and so can influence the extent to which Latinos are represented in these positions in the school district (Leal et al 2004). School districts with Latino representation at the board level therefore have a greater capacity to enact policies to address Latino teacher shortages and more generally, are expected to be more proactive in their efforts to recruit Latino teachers.

Another means by which educational stakeholders can increase their influence on school policy in general, and hiring practices more specifically is by creating a *charter school*. Because charter schools are granted autonomy over their operation and freed from school regulations that

traditional public schools must follow, they have considerably greater flexibility with many aspects of schooling, including teacher recruitment and retention policies, and often hire teachers from “non-traditional” backgrounds (Burian-Fitzgerald and Harris 2004).ⁱⁱⁱ This may have implications for charter schools’ capacity to hire Latino teachers.

That charter schools in many states are not covered by collective bargaining agreements raises the more general question of how *teacher’s unions* influence school governance and decision making in the area of teacher hiring and recruitment. Because unions typically impose greater barriers to entry and reduce the schools’ and districts’ flexibility to hire new teachers or teachers from non-traditional backgrounds, it is commonly believed that they play a role in reducing the incidence of minority teachers, particularly in urban districts (Levin and Quinn 2003). For example, union transfer requirements that give existing teachers the first choice of openings before any new teacher can be hired are especially likely to disadvantage prospective Latino teachers in areas where they are new arrivals. Likewise, union contracts that allow transferring teachers to displace less-senior teachers from their positions are also likely to adversely affect Latino teachers in many districts.

B. Policy Tools

While certain political and governing arrangements increase the likelihood that policies seeking to address the Latino teacher-student gap get on the agenda and receive adequate support, these arrangements tell us little about what kinds of policies have actually been pursued or how effective these policies are in addressing that gap. In our review of the literature we found two broad policies in particular, certification requirements and state and district incentives, were most strongly associated with changes in the supply of Latino teachers.

Alternative Certification

Beginning in the early 1990s most states instituted stronger requirements for teacher certification, including the use of standardized tests (Kirby and Hudson 1993). The initiation of these more stringent requirements resulted in a decline in minority teachers, especially African-American and Latino teacher candidates. Coupled with the overall decline in persons entering the teaching force (NCES 2002), many states opted for some form of alternative certification. In its broadest sense, alternative certification programs refer to programs that bring new teachers into the system without a Bachelor's degree *in education*. The majority of these programs still require a Bachelor's degree in some field and in addition, intensive mentoring programs for one to two years (National Center for Education Information 2005).

Many districts began implementing alternative certification programs in the early 1980's, and have had good success. For example, approximately 18% of new hires in California enter teaching through one of the state's 63 alternative routes and almost half of these teachers were from underrepresented minority groups (National Center for Education Information 2005). And, in Texas, which implemented its first alternative teacher certification program in 1985, 48% of new hires now come through its 75 alternative teacher certification programs (National Center for Education Information 2005). During roughly this same period the Latino teaching force in Texas increased from 12-18% (Kirby, Berends, & Naftel 1999).

In recent years, alternative certification programs have been adopted by many districts across the country. According to a 2005 poll conducted by the National Center for Education Information, 619 providers of individual programs in 47 states as well as the District of Columbia had implemented 122 alternative routes to teacher certification. Given these programs' objectives, we would expect that districts actively using alternative certification options would have larger numbers of Latino teachers and potentially a smaller Latino teacher-student gap.

State and District Incentive Policies

The demand for more teachers in general and more diversity in the teaching force is not uniform across the country. Urban school districts tend to suffer from large teacher shortages due to high teacher turnover rates and the reluctance of certified teachers to take jobs in these settings (National Commission on Teaching and America's Future 1996; Clewell & Villegas 1999). In order to address these concerns, many states have implemented geographic shortage incentives. These typically involve legislation that provides financial incentives for teachers to relocate to high-need areas, like urban and rural school districts. Included in these financial incentives are salary increases, bonuses, or tax credits (Education Commission of the States, 2002).

In addition to the disproportionate need for teachers in general in certain geographic locations, specific fields have become severely underrepresented, such as English as a Second Language (ESL) and bilingual education (Urban Teacher Collaborative 2000). Attempts to address these shortages include monetary incentives as well as offering additional training and support for teachers. In their analysis of the effectiveness of incentives in Texas, Hanushek et al (2002) found that salary plays a modest role in teacher retention, whereas effective training and a supportive teaching environment are more important. Unfortunately, although many states have implemented these shortage area incentive programs, few have evaluated their effectiveness (National Association of State Boards of Education, 2002). While these incentive programs are not always targeted specifically at Latino teacher recruitment, we expect that the implementation of these incentive programs could signal to Latino candidates a willingness of a district to address the need for a more diverse teaching force.

Variations Across the Gateways

Understanding the different immigration and migration patterns of Latinos across the United States provides a unique context in which to assess the demographic, social and institutional characteristics of our four gateway/destination types, and well as policy incentives and political structures. Table 1 provides an overview of each of these factors by gateway type. To begin with, although the gap between Latino students and teachers is consistently around 25 percent, Historical Destinations have the largest number of Latino teachers and students. Given their long-standing history of a large Latino population, this is not unexpected. Historical Destinations, as expected, also include fewer foreign-born and non-citizen Latinos, and their Latino population tends to have more resources (as measured by homeownership) than the other immigrant gateways.

As expected, Latino political incorporation is strongest in the Historical Destinations, where 43.8 percent of the school boards have at least one Latino school board member. Given the association of charter schools with largely Latino districts, it is not surprising that many of the school districts in the Post WWII Gateways, as well as the New and Historical Destinations, have charter schools. Teachers unions are found in all four types of gateways/destinations, although they are more predominant in Continuous Gateways and Post WWII Gateways.

With regard to policy tools, we find that alternative certification programs are common everywhere, but are most prevalent in Post-WWII Gateway districts. On the other hand, stringent certification requirements are more common in the Continuous Gateways, which perhaps have spent the most time addressing teacher quantity and quality issues. Incentive programs are also common across all gateway types, although different gateways prefer different policy initiatives. New Destinations are more likely to have multiple incentive programs, including relocation,

shortage and ESL training, whereas Continuous Gateways are distinguished by having the highest entry-level salaries.

**** Insert Table 1 about here ****

In sum, while there is a general Latino teacher shortage across the United States, our use of immigrant gateways and destinations has provided a framework from which to understand the various ways in which this shortage is manifest. We have reviewed the structural constraints that underlie the Latino teacher shortage, including citizenship issues, educational attainment and resources. Lastly, we have provided a brief overview of the political and policy solutions states and school districts have used to address the shortage. In the next section, we analyze the role these institutional, contextual and policy factors have on the number of Latino teachers within a district.

Data and Methodology

To empirically analyze the set of relationships articulated in the preceding section, we use the 1999-2000 National Center for Educational Statistics, Schools and Staffing Survey district sample. We selected only those districts that had at least 10 percent Latino students enrolled and that were located either in a central city or in a suburban or county district situated in a metropolitan area. Our sample includes the districts and schools where the majority of Latino students attend school, while also capturing the regional variation in district organization and Latino ethnic origin, migration patterns, and political incorporation. This sample includes 387 school districts in four immigrant gateways/destinations.

A. Modeling the “Gap” between Latino Teachers and Students.

Arguments decrying the need for more Latino teachers often point to the difference in the proportion of Latino students and Latino teachers. However, simply creating a difference

measure misrepresents the extent of the gap, since this measure is driven almost exclusively by the proportion of Latino students. To circumvent this issue, we utilize two different measures to assess the Latino teacher shortage. Our first analysis investigates the factors that explain the proportion of Latino teachers within a school district.^{iv} This analysis, which models the underlying supply of Latino teachers in the district, addresses our first research question: What accounts for the proportion of Latino teachers (relative to all teachers) within a district? Although this measure allows us to tap into how population dynamics, immigrant gateways and policy/political prescriptions affect the proportion of Latino teachers, we additionally wanted to test the relationship between Latino teachers relative to Latino students in order to more directly examine the gap. Thus, we perform an additional analysis that focuses on the Latino teacher incidence rate. That is, within a district, what is the rate of Latino teachers per 100 Latino students?^v The incidence rate provides a standardized measure of the student-teacher gap and allows comparisons across districts with different proportions of Latino students and teachers.

We hypothesize that the size of the gap will be a function of political and governance structures, district policies, socio-demographic constraints, and immigrant destinations.

Political/Governance Structures

Latino political incorporation is operationalized as the number of *Latino School Board Members* in 1999. We expect that as the number of Latino school board members increases, the proportion and incidence of Latino teachers also increase. We included a dummy variable for districts that allowed for *Charter* schools, with the expectation that districts with more schooling options and more alternative staffing programs will have more Latino teachers. Lastly, we control for whether or not the teachers within the district have an agreement with the teacher's

Union for collective bargaining (1=yes, 0=no), with the expectation that this agreement would diminish the ability of the district to try many alternative solutions for the teacher shortage.

District Policies

The explanatory variables include district-level policies aimed at remedying the gap, including: (1) providing teachers with free *Training* in ESL or bilingual education (1= yes, 0=no); (2) using *Emergency Certification* to fill shortages (1= yes, 0=no); and (3) providing incentives for teachers to *Relocate* to shortage areas or to recruit teachers for *Shortage* areas (1=yes, 0=no). We would expect that each of these policies would lead to an increase in the proportion and rate of Latino teachers. We also assess how *Stringency* of the district's certification standards affects the proportion and incidence of Latino teachers. Ranging from 0 to 3, *Stringency* measures the extent to which a district has incorporated the NCLB requirements—having a Bachelor's degree, being fully state-certified, and demonstrating competence in each subject area taught (each counting one point on this scale). Given the increased level of inflexibility for districts, as well as the evidence suggesting that Latinos may have more difficulty meeting all of these requirements, we would expect that as districts attempt to meet this requirement, fewer Latinos would enter the teaching profession. Lastly, we include *Entry Level Salary* for teachers with a bachelor's degree and no teaching experience as a control for desirability of teaching versus other careers. Increasing salaries for teachers should be an incentive for all candidates, regardless of race, and given the larger pool of Anglo teaching candidates and thus increased competition, may actually dampen Latino candidates' chances of securing a job in a district.

Socio-Demographic Constraints

The availability and eligibility of teachers is also an important determinant of the student-teacher gap, since it has a direct bearing on the supply of teachers. As noted previously, a number of socio-demographic characteristics of the Latino population may pose as constraints in this supply. Specifically, we would expect a smaller pool of eligible Latino teachers in school districts with higher proportions of new immigrants. Similarly, districts are likely to face greater constraints when it comes to the supply of eligible or qualified Latino teachers where the Latino adult population is smaller, less assimilated, and less educated. In order to test the effects of these socio-demographic constraints, we include variables that measure the district percentage of *Latinos 25 and older*, the percentage of *Latino Non-Citizens*, the percentage of *Latinos with a Bachelors degree*, and the percentage of *Latino Homeowners* in the district. Lastly, we control for the total enrollment of students in the district (*District Size, logged*), and those districts within *Central cities*.

Immigrant Gateways

Lastly, we include dummy variables for each of the three immigrant gateway types: Continuous, Post WWII, and New Destination. The excluded category or reference group here is the Historical Destinations. Our expectation is that, given the impact of the contextual and institutional differences on the social and political incorporation of Latino immigrants discussed above, immigrant gateways – in comparison to Historical Destinations – will have a smaller proportion of Latino teachers, and a smaller Latino teacher incidence rate. Further, the supply problem is likely to be worse in immigrant gateways where Latinos are less established.

Analysis and Results

Table 4 provides the results from our OLS regression models. The linear modeling means we can translate the coefficients directly, and in both models, positive coefficients translate into

more Latino teachers, either as a proportion of the total teacher population within the district (Model 1) or as an incidence rate per one hundred Latino students (Model 2).

** Insert Table 2 about here **

Beginning with Model 1, we find that governance and organizational arrangements have a significant effect on the proportion of Latino teachers. First, Latino representation on the school board increases the proportion of Latino teachers by .034 per elected board member. This finding supports previous research and our hypothesis regarding the positive impact Latino representation can have on the supply of Latino teachers. Translating the substantive effect of school board membership on the proportion of Latino teachers by immigrant gateway/destination, we find that since the modal category for all gateways/destinations in 1999 was no Latino school board representation, and holding all other variables constant, the difference in the proportion of Latino teachers in Historical versus Post WWII gateways is .07, and in Historical versus New gateways is .05. We also find that increasing representation from 0 to 5 school board members doubles the predicted proportion of Latino teachers.

Districts that provide charter school options also have a higher proportion of Latino teachers (.024), although this can be offset by the presence of teachers' union, which decreases proportion by .028. In sum, districts with greater Latino representation at the school board level, and more flexibility in personnel and other policies provided by charter schools, have larger proportions of Latino teachers.

In terms of district-implemented policies, we find that the programs aimed specifically at the Latino teacher shortage—alternative certification and ESL training—increase the proportion of Latino teachers within the district (by .061 and .017, respectively). On the other hand, more general incentive programs were not significant. Although the sign is in the correct direction for

both relocation and shortage incentives, neither of these variables made a significant difference in the variation between districts. We speculate that while the provision of these incentives signals that a district is perhaps open to alternative methods of attracting more Latino teachers, the incentives themselves are not race or ethnicity-specific, and thus may also reward non-Latino teachers.

Greater stringency in certification requirements does not appear to affect the supply of Latino teachers. Given our cross-sectional design, it is not possible for us to analyze how the initiation of these more stringent requirements impacts the Latino teacher population over time; however, our findings suggest that these requirements are not having adverse effects on the Latino student-teacher gap, as we expected they would. Finally, entry-level district salaries have no effect on the proportion of Latino teachers in a district. Again, because our analysis is restricted to one point in time, we cannot comment on how increases or decreases impact the number of Latino teachers. Moreover, without information on starting salaries in other professions, it is not easy to tease out how starting teacher salaries compare or whether competition between teaching and other professions exists.

In addition, the results support our hypotheses regarding the eligibility and availability of Latino residents within the district. Specifically, the proportion of Latinos 25 years and older, as well as the proportion with a Bachelor's degree and homeowners, are positively related to the number of Latino teachers within the district. While not the sole factors related to the Latino teacher shortage, our analysis demonstrates the importance of having a population of eligible Latino adults with the resources to become teachers.

While many of the socio-demographic measures we employ to capture the constraints districts face in developing a sufficient pool of potential Latino teacher candidates, other

unmeasured factors are captured by the dummy variables representing the different types of immigrant gateways. The coefficients on two of these, Post WWII Gateways and New Destinations, were significant and negative, as we expected. Compared to districts in Historical Destinations, there are significantly fewer Latino teachers in the Post WWII gateways and New Destinations. Given their more recent experience with immigration in general, the tendency for cities in these locations to be characterized by reformed governments, and the absence of institutionalized arrangements to foster immigrant political incorporation, these two immigrant gateways face greater supply problems, *ceteris paribus*, than do Historical Destinations. Further, Continuous Gateways, which have a longer history of immigration, a higher incidence of unreformed governments, and a greater tradition of immigrant political incorporation, do not appear to have significantly greater supply problems than Historical Destinations.

Model 2 investigates these same relationships with a different operationalization of the Latino teacher shortage across the United States. The Latino teacher incidence rate provides a standardized measure of the size of the Latino student-teacher gap since it takes into account the number of Latino teachers per 100 Latino students in the districts. Thus, the analysis here is not simply of the size of the Latino teacher force, but also of how well the Latino teacher force meets the demand posed by the size of the Latino student body.

In general, we find very similar results as Model 1. Again, governance and organizational arrangements prove to be significantly related to the Latino teacher incidence rate. Gaining representation on the school board increases the rate by .198 points. Substantively, we can interpret this in the following way: increasing Latino school board representation from one to five members translates into an increase of one additional Latino teacher per 100 Latino students.

Charter school provisions are more strongly tied to an increase in Latino teachers, whereas again we find a negative relationship between teacher's union and the incidence rate.

District-level policies also follow a similar pattern in Model 2. However, the only district policy that substantially decreased the gap between students and teachers is alternative certification programs. That is, districts with an alternative certification program have 0.639 more teachers per 100 Latino students than districts without certification. Unlike Model 1, Model 2 shows that providing ESL training is not significant. We speculate this is due to the different operationalization of the Latino teacher shortage. As the incidence rate specifically takes into account the number of Latino students, districts with large number of Latino students may be more likely to already have large Latino teacher population, and thus not need ESL training, or employ paraeducators to supplement the ESL classes, again restricting the likelihood of offering ESL training (Genzok, Lavadenz and Krashen 1994; Ng 2003). Thus, our model of the Latino teacher incidence rate again points to the importance of policies directed specifically at diversifying the teaching force.

Our hypotheses regarding the role socio-demographic constraints are confirmed in Model 2 as well. Again, as the proportion of the Latino population increases that has a Bachelors degree, owns a home, and is older than 25, the number of Latino teachers per 100 students significantly increases. The effect of education is particularly salient—a 0.20 increase in the proportion of the Latino population that has a Bachelor's degree results in approximately one additional Latino teacher per 100 Latino students. In addition, the number of foreign-born Latinos tends to negatively affect the number of Latino teachers; holding all else constant, as the proportion of Latino non-citizens increase, the incidence of Latino teacher decreases. Lastly, we find similar results regarding the manifestation of the Latino teacher shortage by immigrant

gateway. Compared to Historical Destinations, both Post WWII Gateways and New Destinations have fewer Latino teachers per Latino students.

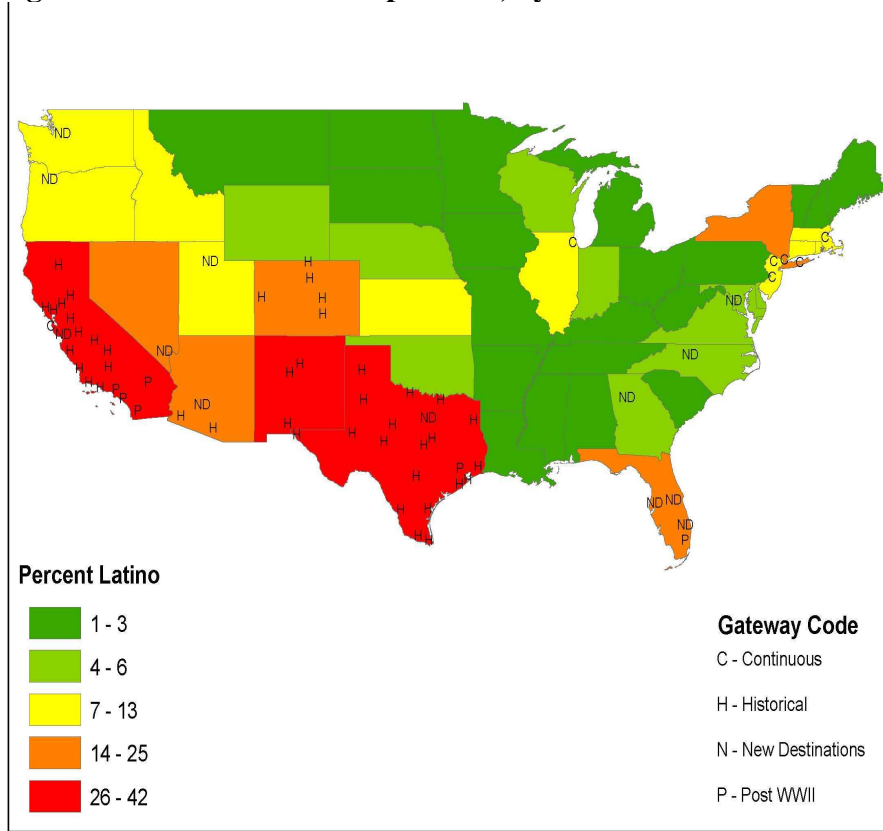
Discussion and Conclusions

Our analysis of the Latino student-teacher gap within the framework of Latino immigration and migration patterns provides a unique understanding of the ways in which institutional and contextual variables impact the supply of Latino teachers. Our findings demonstrate that districts with a larger eligible Latino teacher pool are characterized by a particular set of socio-demographic features, as well as important district-level political structures and policies. Importantly, the Latino teacher shortage is intrinsically related to the proportion of “eligible” Latinos within the district; that is, those 25 and older who hold a Bachelor’s degree. In addition, citizenship status matters, as does the extent to which Latinos are attached to their local community, as measured by the percentage of Latino homeowners in our analyses. These findings suggest that the gap found in newly settled areas will continue to be large, since in these communities Latino populations tend to be younger, less educated, less likely to own a home, and are comprised of a greater percentage of non-citizens. They thus face greater constraints in increasing the pool of eligible Latino teachers from which their local school districts can draw.

Our analyses also provide some evidence of the effectiveness of alternative hiring practices, incentive structures, and political arrangements. Our findings echo those of previous researchers as to the inadequacy of incentive programs to demonstrably change the supply of teachers. Moreover, we find that general policies aimed at the overall teacher shortage are not particularly well suited to address the *Latino* teacher-student gap. Demonstrating an interest in specifically recruiting Latino teachers and providing Latinos with a representative voice in

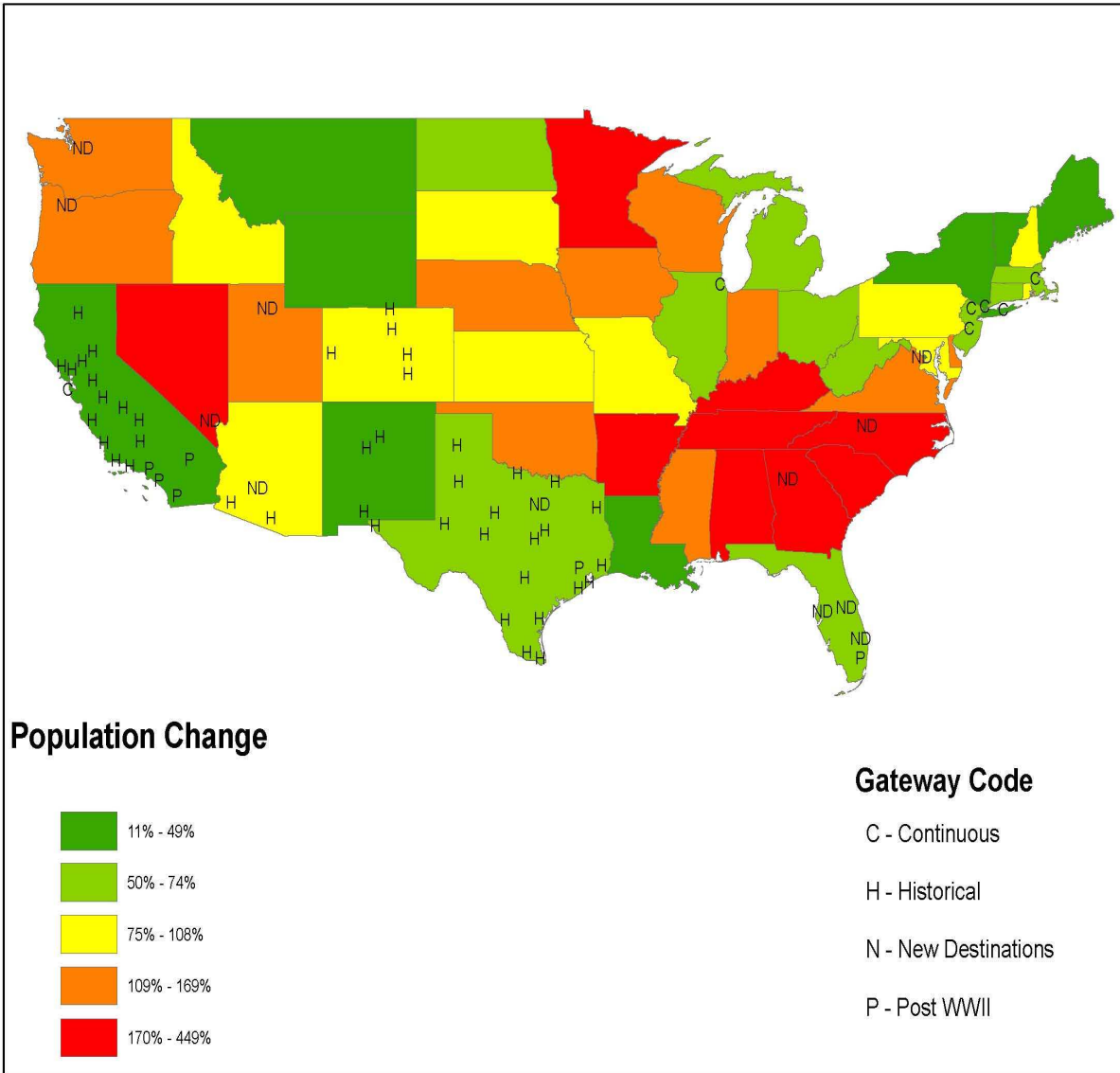
school governance and the educational process more generally are important ways districts can increase the supply of Latino teachers and reduce the Latino student-teacher gap. This holds especially in Post WWII gateways and New Destinations, where the immigrant population is less incorporated both politically and socio-economically.

Figure 1: Percent Latino Population, by State 2000



Source: U.S. Census 2000.

Figure 2: Percent Change in Latino Population, by State, 1990-2000



Source: U.S. Census, 2000.

Table 1: Demographic, Social and Institutional Characteristics of School Districts by Gateway/Destination Type, 1999/2000

	Historical Destinations (n=139)	Continuous Gateways (n=61)	Post WWII Gateways (n=83)	New Destination Gateways (n=104)
% Latino Students	48.8%	27.4%	38.8%	29.8%
% Latino Teachers	22.8%	4.9%	10.2%	7.5%
% Latino population 25 years and older	31.2%	20.0%	27.8%	17.2%
% Latinos Foreign Born	26.4%	50.2%	39.0%	39.1%
% Latinos Non-citizens	19.3%	35.4%	27.5%	31.1%
% Latinos with a Bachelors degree, 2000	6.1%	11.8%	5.6%	7.0%
% Latino homeowners	59.6%	39.4%	55.1%	50.9%
% with Latino School Board Representation	43.8%	4.9%	28.9%	19.2%
% with charter schools	15.1%	11.4%	24.1%	15.3%
% with teacher's unions	56.8%	100%	80.7%	62.5%
% with Alternative Certification programs	85.6%	78.6%	93.9%	86.5%
% with relocation incentives	10.7%	6.5%	9.6%	10.5%
% with shortage incentives	40.2%	16.3%	38.5%	35.5%
% with free ESL training	46.0%	34.4%	57.8%	52.8%
Average District Entry Salary (with BA)	\$27,879	\$31,987	\$31,088	\$28,360

Source: SASS 1999-2000; US Census 2000; NALEO 1999.

Table 2

OLS Models of the Latino Teacher Supply/Student-Teacher Gap

	Model 1: Proportion of Latino Teachers	Model 2: Latino Teacher Incidence Rate
Latino School Board Member	.034*** (.004)	.198*** (.046)
Charter Schools	.024* (.014)	.403*** (.152)
Teacher's Union	-.028** (.012)	-.358*** (.129)
ESL Training	.017* (.010)	.117 (.109)
Alternative Certification	.061** (.026)	.639** (.274)
Relocation Incentives	.0002 (.017)	.032 (.179)
Shortage Area Incentives	.004 (.011)	-.095 (.120)
Stringency of Certification Requirements	.006 (.004)	.079 (.051)
Entry Level Salary	-.000 (.000)	.000 (.000)
Latinos 25+	.574*** (.046)	2.95*** (.484)
Non-Citizen Latinos	-.024 (.052)	-1.78*** (.544)
Latinos with Bachelors Degree	.379*** (.113)	5.29*** (1.18)
Latino Homeowners	.113*** (.041)	.967*** (.431)
District Size, logged	.006 (.004)	.062 (.048)
Central City	.011 (.012)	.088 (.127)
Continuous Gateways	-.017 (.021)	-.304 (.219)
Post WWII Gateways	-.064*** (.016)	-.848*** (.167)
New Destinations	-.047*** (.014)	-.334** (.151)
Constant	-.160** (.077)	-.652 (.803)
F (18, 366)	45.27 (.000)	20.34 (.000)
R ²	.6901	.5000

*p<.10, ** p<.05, ***p<.001

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Endnotes

ⁱ Singer (2004) argues for six major types of immigrant gateways. However, her analysis is not focused solely on Latino immigrants, nor does she take into account the large number of Latinos who have been in the United States since before the 1900s. Thus, while we use her general framework, we have adapted her typology to fit more specifically to the Latino population and immigration patterns.

ⁱⁱ We collapsed Singer's (2004) original classification of *emerging*, *re-emerging* and *pre-emerging* into a more general category (New Destinations) that now encompasses cities that have witnessed large immigrant growth in the last 20 years.

ⁱⁱⁱ State laws regarding teacher certification requirements for charter schools vary considerably. Some states require charter school operators to hire only certified personnel while others are allowed to hire a specified percentage of uncertified teachers.

^{iv} The mean for this variable is .131, with a range of 0 to .925.

^v The mean for this variable is 1.75, with a range of 1 to 7.037.