School Composition, Social Origins, and the Educational Outcomes of Mexican Origin Youth

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Abstract

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The Mexican origin population is one of the largest and fastest-growing racial/ethnic minority groups in U.S. schools. Mexican origin students are also one of the most educationally disadvantaged subgroups, exhibiting gaps with peers in educational outcomes throughout the schooling pipeline. This dissertation examines the extent to which the racial/ethnic and socioeconomic composition of high schools attended by Mexican origin youth contribute to their disadvantaged educational outcomes. Using data from the Educational Longitudinal Study of 2002, this research evaluates how Mexican origin high school students are distributed across schools by the racial/ethnic and socioeconomic composition of their peers, and assesses how racially/ethnically and socioeconomically isolated school environments impact levels of dropout and school engagement among Mexican origin adolescents. The results show that Mexican

origin youth are more racially/ethnically and socioeconomically isolated in schools than both non-Latino white and black students. Mexican origin youth show limited evidence of spatial assimilation across schools by immigrant generational status. However, Mexican origin youth in households with greater socioeconomic resources are enrolled in more racially/ethnically and socioeconomically integrated schools than those in the most impoverished households. Mexican origin high school students that attend racially/ethnically and socioeconomically isolated schools in 10th grade have a greater risk of dropout by 12th grade than those in more integrated schools. These patterns, however, are due to the fact that Mexican origin youth in racially/ethnically and socioeconomically isolated schools exhibit characteristics that place them at a greater risk of dropout, including disadvantaged social origins and low levels of academic achievement in 10th grade. Finally, the analysis of school composition and school engagement patterns reveals an affective-behavioral tradeoff for Mexican origin youth with exposure to non-minority and non-poor youth in schools. Mexican origin youth are significantly less likely to report that they like school as they gain exposure to non-minority students, even net of background confounders. However, they are more involved in school-sponsored activities in schools with more affluent peers. These findings complicate the argument that high-minority, high-poverty schooling contexts are to blame for educational disadvantages among Mexican origin youth.

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DEDICATION

To Mexican immigrants and their descendants living in the United States, with the hope that knowledge will promote equality.

CHAPTER 1: INTRODUCTION

I. INTRODUCTION

Mexican origin youth are one of the most disadvantaged racial/ethnic subgroups in U.S. schools. Educational gaps between Mexican origin and non-Latino white students prevail throughout the schooling pipeline (Schneider, Martinez, and Owens 2006). High school, however, is a critical juncture for this group. Both foreign-born and U.S.-born Mexican origin youth are more likely to drop out of school than their non-Latino white peers (Hirschman 2001; Landale, Oropesa, and Llanes 1998; National Center for Education Statistics 2010). Mexican origin youth who remain in school are underprepared to pursue a 4-year college degree relative to their peers, with lower than average levels of students taking Advancement Placement and Scholastic Assessment Tests (Schneider et al. 2006). Mexican origin Latino 18-24 year-olds who attain a high school degree are also less likely to enroll in college than both white and black high school graduates (Fry 2002).[1]

Educational inequalities between Mexican origin and white youth will have long-term impacts on patterns of racial/ethnic inequality in the United States as Mexican origin children become an increasing share of the school-age population. In 2009, Mexican origin Latino/a youth made up approximately 15.7% of the U.S. population under the age of eighteen (author's calculations based on Passel 2011: Tables 2 and 4). Latino/as—a group that is largely composed of Mexican immigrants and their descendants—are projected to become an growing share of the U.S. school-age population, due to the young age structure of the Latino/a population and higher

[1] In the remainder of this introduction, the terms "white" and "black" refer to "non-Latino/a white" and "non-Latino/a black" individuals.

fertility rates among Latina women (Johnson and Lichter 2010). A failure to address educational disparities between Mexican origin youth and their peers could exacerbate racial/ethnic socioeconomic inequalities in the U.S. well into the future.

In this dissertation, I scrutinize the racial/ethnic and socioeconomic composition of peers in school as an explanation for Mexican origin educational disadvantages. In Chapter 2, I begin by evaluating how Mexican origin youth are distributed across schools by peer racial/ethnic and socioeconomic characteristics. I test the hypothesis that observed gaps in school composition between Mexican origin and white youth are due to differences in levels of socioeconomic and spatial assimilation. In Chapters 3 and 4, I turn to an analysis of how racial/ethnic and socioeconomic isolation in school impacts Mexican origin dropout and school engagement patterns. In Chapter 3, I test the hypothesis that Mexican origin youth have a reduced risk of dropping out of school as they gain exposure to non-minority and socioeconomically advantaged youth. In Chapter 4, I test the "school isolation paradox." I determine whether Mexican origin engagement is lower as Mexican origin youth gain exposure to non-minority and non-poor students.

In the remainder of this introduction, I briefly review the prior substantive and empirical literature on school compositional characteristics and educational patterns among Mexican origin youth. I highlight gaps in our knowledge of Mexican origin school isolation patterns and discuss the conflicting evidence about the influence of racial/ethnic and socioeconomic isolation in schools on Mexican origin educational outcomes. I conclude by reviewing the aims for each empirical chapter of the dissertation and briefly discuss the dataset used in my analysis—the restricted-use Educational Longitudinal Study of 2002 (ELS:2002).

II. BACKGROUND

Racial/Ethnic and Socioeconomic School Segregation and Isolation Patterns Among Mexican Origin Youth

The second chapter of the dissertation evaluates gaps in school racial/ethnic and socioeconomic composition between Mexican origin and white youth.

Few prior studies have investigated school racial/ethnic and socioeconomic segregation and isolation patterns among Mexican origin youth as a national origin group of interest. Data constraints are the main reason for a lack of knowledge in this area. The National Center for Education Statistics (NCES) provides counts of racial/ethnic and socioeconomic groups (students receiving free and reduced price lunch) in schools through datasets such as the Common Core of Data Public School Universe Survey. These counts are used to calculate nationally aggregated measures of school segregation, exposure, and isolation.

Schools and school districts only collect data on Latino/a ethnic status. They do not have data on student or parental country of origin or Latino/a subgroup (Mexican origin, Cuban, Puerto Rican, etc.). In this way, Mexican origin youth are subsumed within the broader pan-ethnic Latino/a population in NCES counts used to generate school segregation, exposure, and isolation measures that are used in scholarly work.

Studies of Latino/a-white school segregation, exposure, and isolation patterns are also few and far between in comparison to studies of black-white school segregation. Black-white school segregation and isolation patterns have been at the forefront of scholarly interest in the wake of *Brown v. Board of Education,* the era of *de jure* desegregation, and the recent re-segregation of schools as formal desegregation policies have been rescinded (see Orfield and Eaton 1996; Reardon et al. 2012; Reardon and Owens 2014). Latinos were not a major target of school desegregation efforts (Orfield and Eaton 1996; Orfield, Kucsera, and Siegel-Hawley

2012), and thus Latino-white school segregation and exposure patterns have not garnered as much scholarly attention as black-white school segregation patterns. Additionally, Latino-white school segregation patterns have remained fairly constant over the past few decades, whereas black-white school segregation declined in the 1970s and 1980s but have increased from the 1990s onward due to "school re-segregation" (Orfield and Eaton 1996; Orfield et al. 2012; Reardon et al. 2012; Reardon and Owens 2014).

Given that the Mexican origin population makes up the majority of the Latino/a population, some insight on Mexican origin school racial/ethnic and socioeconomic segregation and isolation patterns can be gleaned from statistics on the Latino/a population. The index of dissimilarity is a measure that is commonly used to quantify levels of evenness among racial/ethnic groups across neighborhoods and schools (Massey and Denton 1988). The index of dissimilarity has a range of values from 0.0 to 1.0. A value of 0.0 indicates that all groups are evenly dispersed across units such as schools, to 1.0, where all groups are completely segregated from one another across units.

The Latino/a-white index of dissimilarity value declined from .75 to .69 from 1991 to 2009 (Orfield et al. 2012), indicating that Latino/as have become more evenly dispersed across schools in the last few decades. However, the dissimilarity value of .69 in 2009 is high, and implies that 69% of Latino/a or non-Latino white students would need to move to a different school in order to ensure an even distribution of Latino/a and white students across schools.

Measures of exposure and isolation represent another dimension of school segregation. Exposure refers to the proportion or percentage of members of a group that a typical student is exposed to in his/her school (Massey and Denton 1988). Isolation is the term used to refer to exposure to members of one's own group. It is possible to have complete evenness across

schools but high isolation. For instance, in a school district where 70% of students are Latino/a but all students are distributed equally across schools, the typical Latino/a student would attend a school where 70% of fellow students are Latino/as.

Despite increasing dispersion across schools, Latino/a exposure to whites declined, and their isolation with minority and co-ethnic students increased, over the past two decades (Fiel 2013; Krogstad and Fry 2014; Orfield et al. 2012). The racial/ethnic isolation of Latino/a students in schools is also paired with socioeconomic isolation. During the 2009-2010 academic year, the typical Latino/a student attended a school where 57.2% of the student body was Latino/a, and 63.5% of students were from households in poverty (Orfield et al. 2012). In that year, black students had similar levels of socioeconomic isolation with Latinos, whereas the typical white student attended a school where 37.0% of students were poor.

Increasing suburbanization among Latino/as and the recent dispersion of Mexican origin families to "new" immigrant destination may provide greater opportunities for some Mexican origin youth to have greater exposure to non-minority and non-poor students in schools. Latino/a suburbanization has increased over time, with approximately 50% of Latinos in metropolitan areas living in suburban locations by the year 2000 (Timberlake, Howell, and Staight 2010). Over the past few decades, Mexican origin families have also been increasingly drawn into communities outside of traditional immigrant gateways, in states such as Nebraska, Georgia, and North Carolina (Massey 2008; Zuñiga and Hernández-León 2005). Research on school and neighborhood segregation in new destinations shows that Latino-white *neighborhood* segregation is higher in newer immigrant and Latino/a gateways than in established gateways (Hall 2013; Lichter et al. 2010). However, other research shows that the schools attended by

Latino/as in new destinations areas have lower concentrations of minority and poor students than those in established gateways (Fry 2011).

Thus, while Latino/as in new gateways face increased neighborhood segregation, Latino/a children appear to have greater exposure to white and non-poor students in new destination schools. This discrepancy may be due to the fact that school catchment areas in new destinations draw students from multiple neighborhoods, providing greater opportunity for integration in schools than in neighborhoods. Additionally, the Mexican origin population may constitute a smaller share of the overall school-age population in new versus established destinations, which will increase the likelihood that they will encounter higher proportions of non-minority and non-poor students in new destination versus established destination schools. Still, only approximately 23% of the Mexican origin adolescent population lives outside of the top five established gateways of California, Texas, Illinois, Arizona, and Colorado (author's calculations based on American Community Survey data, 2005-2009).

In addition to a lack of research on Mexican origin school isolation patterns, there is a dearth of scholarly work examining the determinants of Mexican origin school compositional characteristics. It is unclear how Mexican origin adolescent isolation in high-minority, high-poverty schools relates to patterns of socioeconomic and spatial assimilation. For example, socioeconomic disadvantages among some Mexican origin families may be the culprits for Mexican origin isolation in schools with high concentrations of minority and poor students. Mexican origin families that exhibit a higher degree of socioeconomic assimilation might be able to enroll their children in more integrated school settings. Similarly, Mexican origin families that experience spatial assimilation across neighborhoods could also enroll their children in neighborhood schools with lower proportions of minority and poor students.

Prior research, however, suggests that factors beyond socioeconomic status may keep Mexican origin students isolated in high-poverty, high-minority schools. In his study of schooling contexts among Mexican American children, Crosnoe (2005) finds that Mexican American kindergartners are more likely to attend schools with high proportions of minority and poor students, as well as schools with other problematic characteristics, relative to students with similar socioeconomic background characteristics. His work suggests that factors beyond socioeconomic status are to blame for Mexican origin isolation in high-minority, high-poverty schools.

In the second chapter of the dissertation, I examine school racial/ethnic and socioeconomic compositional patterns among Mexican origin high school students in the ELS:2002. I characterize patterns of racial/ethnic and socioeconomic isolation in schools among Mexican origin youth, and investigate why Mexican origin youth are more likely to attend high schools with greater concentrations of minority, Latino/a, and socioeconomically disadvantaged students than white youth. Drawing on frameworks of immigrant assimilation and neighborhood locational attainment, I determine whether school compositional gaps between Mexican origin youth and their white peers disappear once measures of socioeconomic and spatial assimilation are taken into account.

My analysis in Chapter 2 does not evaluate Mexican origin patterns of *school segregation/evenness*, but rather focuses on average levels of Mexican origin student *exposure*/*isolation* with non-minority, Latino/a, and socioeconomically advantaged students in survey sample data. I measure *isolation* or *exposure* by using ELS:2002 survey data to calculate the proportion of students within a school of a specific race/ethnicity and the average socioeconomic level of students in the school. My work does not calculate aggregated indices of

racial/ethnic or socioeconomic *unevenness, isolation* or *exposure* among Mexican origin youth. These calculations would require counts of Mexican origin and white students across all schools, which are not available.

A portion of Mexican origin isolation in schools could be due to school segregation—the uneven sorting of students across schools. However, a portion could also be due to the demographic composition of the local population (Fiel 2013). For instance, a Mexican origin student living in Los Angeles would have a greater probability of attending a majority-minority school than a student living in Omaha, even if all minority students were spread equally across schools in both locations, because Los Angeles has a larger proportion of minorities than Omaha. However, it is clear that the Mexican origin isolation and exposure patterns that I observe in Chapter 2 are partially due to school segregation, given high levels of Latino-white school segregation (Orfield et al. 2012).

Are high-minority, high-poverty schools to blame for educational disadvantages among Mexican origin youth?

In the third and fourth chapters of the dissertation, I evaluate the impact of racial/ethnic and socioeconomic isolation in schools on the risk of school dropout and levels of engagement among Mexican origin youth. Theories of educational stratification and immigrant incorporation suggest that Mexican origin youth in high-minority, high-poverty schools will have the greatest risk of experiencing adverse educational outcomes relative to their peers in other schooling contexts. The literature on school compositional effects highlights the beneficial aspects of attending schools with higher concentrations of non-minority and socioeconomically advantaged youth.

The Coleman Report (Coleman et al. 1966) demonstrated that peer socioeconomic composition in schools could positively impact student achievement above and beyond a

student's own socioeconomic status. More recent studies confirm that exposure to non-minority and higher socioeconomic status (SES) students in schools is associated with positive educational achievement and attainment outcomes among students (Mickelson, Bottia, and Lambert 2013; Palardy 2013; Rumberger and Palardy 2005; Rumberger and Willms 1992).

Researchers that specifically examine educational patterns among Mexican origin youth also cite high-minority, high-poverty schooling contexts as culprits for Mexican origin educational disadvantages. The segmented assimilation theory argues that Mexican origin youth are at risk of "downward assimilation" because they are largely concentrated in high-minority, high-poverty schools, and they have insufficient household and co-ethnic resources to counteract the negative influences of these schooling contexts on their educational outcomes (Portes and Rumbaut 2001). Crosnoe (2005) similarly speculates that Mexican origin youth may face a "double disadvantage" in U.S. schools. In the "double disadvantage" scenario, Mexican origin youth are more likely to be isolated in high-minority, high-poverty schools than peers with similar socioeconomic background characteristics. Additionally, Mexican origin youth may be more vulnerable to school compositional influences on their educational outcomes than other students, due to their disadvantaged position in U.S. society.

The argument that isolation in high-minority, high-poverty schools has a negative impact on Mexican origin youth has broad intuitive appeal and is supported by empirical research (Crosnoe 2005; Ryabov and Van Hook 2007). However, there are reasons to believe that Mexican origin youth may experience negative educational outcomes with greater exposure to non-minority and non-poor students.

Schools with higher proportions of white and socioeconomically advantaged students may have higher quality institutional resources than high-poverty, high-minority schools (Jencks

and Mayer 1990; Kozol 2012). However, schools with higher concentrations of white and affluent students may also have adverse impacts on Mexican origin students due to negative peer interactions. Racial/ethnic and socioeconomic differences between Mexican origin youth and their peers could become salient in school environments with higher concentrations of white and affluent students in ways that could engender negative intergroup interactions, such as the enactment of stereotypes (see Holland 2012; Ispa-Landa 2013).

Researchers have also argued that Mexican origin youth may perceive white and affluent schools to be more competitive and less collegial than schools with high concentrations of co-ethnic Latino/a students (Portes and Hao 2004). Mexican origin youth could withdraw from schools with higher proportions of white and affluent youth as an adaptive response to negative peer interactions, relative deprivation, or competition (Jencks and Mayer 1990; Portes and Hao 2004). Conversely, Mexican origin youth may be more optimistic and attached to schooling when they are surrounded by peers and teachers whose background characteristics mirror their own (Goldsmith 2004; Johnson, Crosnoe, and Elder 2001).

A number of studies reveal instances where Mexican origin and Latino/a youth perform better educationally in schools with higher concentrations of minority, co-ethnic, and socioeconomically disadvantaged peers, and worse as they gain exposure to non-minority and/or affluent peers (Crosnoe 2009; Goldsmith 2003; Portes and Hao 2004; Potochnick and Handa Forthcoming). Other work also demonstrates that Mexican origin and Latino/a students exhibit better mental health and psychosocial outcomes, and higher levels of educational optimism and pro-school attitudes, in schools with higher proportions of minority and/or poor students (Crosnoe 2005, 2009; Goldsmith 2004). In sum, there is mixed empirical evidence to support the

claim that Mexican origin youth perform better educationally and psychosocially in schools that have higher concentrations of non-minority and non-poor students.

Furthermore, the relative contribution of school composition to educational disadvantages among Mexican origin youth vis-à-vis factors related to social origins is unclear. Differences in social origins, including parental education and household income, are the primary determinants of racial/ethnic educational achievement and attainment gaps (Kao and Thompson 2003). Mexican immigrants have one of the most disadvantaged socioeconomic profiles of any foreign-born group in the United States (Portes and Rumbaut 2001, 2006). While the children and descendants of Mexican immigrants experience a degree of socioeconomic assimilation relative to their immigrant predecessors (Farley and Alba 2002), the Mexican origin third and higher generation (those who are U.S.-born with U.S.-born parents) experiences limited socioeconomic mobility relative to the second generation (Duncan and Trejo 2007, 2011; Telles and Ortiz 2008) and does not achieve parity in socioeconomic outcomes with third and higher generation whites (Duncan and Trejo 2007, 2011).

In sum, Mexican origin youth live in households that are in varying stages of socioeconomic assimilation—a process that may be slow or stagnant beyond the immigrant second generation (Bean and Stevens 2003; Telles and Ortiz 2008). Socioeconomic resources within Mexican origin households are likely to shape both the types of schools that Mexican origin youth are able to attend as well as their educational outcomes. School composition may not have a "net" influence on Mexican origin educational outcomes, but may be solely a reflection of how Mexican origin youth are sorted across schools by background factors such as socioeconomic status. Indeed, a recent study by Lauen and Gaddis (2013) shows that the effects

of peer socioeconomic status on achievement are small or non-significant once student selection into schools is fully taken into account.

This dissertation fills a gap in knowledge about the relationship between school composition and the educational outcomes of Mexican origin youth. As discussed, the evidence on whether Mexican origin youth experience improved educational outcomes as they gain exposure to non-minority and non-poor students is mixed. There is no prior study of school compositional influences on Mexican origin high school student outcomes using the ELS:2002. Prior studies that examine the relationship between school composition and educational and psychosocial outcomes among Mexican American youth use non-nationally representative datasets such as the Children of Immigrants Longitudinal Study (Portes and Hao 2004), focus on Mexican American students in elementary schools (Crosnoe 2005), or use datasets with cohorts of students attending high school prior to the 2000s, such as Add Health (Pong and Hao 2007). Other studies subsume the Mexican origin population within the broader pan-ethnic Latino/a population (Crosnoe 2009; Goldsmith 2003, 2004; Lee and Klugman 2013; Potochnick and Handa Forthcoming; Ryabov and Van Hook 2007). My study is the first to focus on school racial/ethnic and socioeconomic composition as an explanation for educational outcomes among Mexican origin youth as a subgroup of interest in the nationally representative ELS:2002.

III. DISSERTATION AIMS

This dissertation is divided into an introduction, three empirical chapters, and a conclusion. In Chapter 2, I characterize the racial/ethnic and socioeconomic characteristics of schools attended by Mexican origin youth. I then compare gaps in school racial/ethnic and socioeconomic compositional characteristics between Mexican origin youth and their white

peers. I test two competing explanations for gaps in school compositional characteristics between Mexican origin and white youth, which are formulated based on frameworks of immigrant assimilation and neighborhood attainment.

The *assimilation perspective* proposes that Mexican origin youth will close gaps in the proportion of non-minority, same-race/ethnicity, and socioeconomically advantaged students with non-Latino white students through the process of immigrant incorporation. The *assimilation* perspective is operationalized through measures of immigrant generational status, household socioeconomic status, and locational attainment. In contrast, the *racial stratification* perspective argues that Mexican origin youth will face barriers to escaping high-minority, high-schooling contexts, due to racialization and discrimination. In this scenario, measures of assimilation do not fully account for Mexican origin gaps in school compositional characteristics with white peers.

In the third chapter, I scrutinize school racial/ethnic and socioeconomic composition as an explanation for dropout patterns among Mexican origin youth. While Latino/a dropout rates have declined over time (Fry and Taylor 2013), Mexican origin Latino/a youth are twice as likely to drop out of school relative to non-Latino/a white youth (National Center for Education Statistics 2010). Theories of educational stratification, immigrant assimilation, and neighborhood effects suggest that exposure to non-minority and non-poor youth in schools should decrease the risk of dropout among Mexican origin youth. However, Portes and Hao (2004) find that second-generation Mexican origin youth in the CILS are more likely to drop out of school as they gain exposure to higher SES students, even after adjusting for background predictors of dropout. In Chapter 3, I use the ELS:2002 to test the hypothesis that Mexican

origin youth are less likely to drop out of school as they gain exposure to non-minority and higher SES students in schools.

In Chapter 4 of the dissertation, I evaluate the relationship between school racial/ethnic and socioeconomic composition and patterns of school engagement among Mexican origin youth. Prior research shows that Latino/a youth have higher levels of educational optimism an pro-school attitudes than white youth (Goldsmith 2004; Kao and Tienda 1998), but Mexican American youth have lower levels of behavioral engagement in school than whites (Ream and Rumberger 2008).

There is no prior research on the relationship between school composition and levels of engagement among Mexican origin high school students. However, previous studies of school composition and psychosocial outcomes show that Latino/as have the highest levels of educational optimism and mental health in minority and same-race/ethnicity concentrated schools (Crosnoe 2005; Goldsmith 2004; Johnson et al. 2001) and higher levels of social isolation in higher SES schools (Crosnoe 2009). Using multiple measures of school engagement, I test what I refer to as the "school isolation paradox" hypothesis. I determine whether Mexican origin youth are less engaged in school as they gain exposure to non-minority and higher SES students.

IV. DISSERTATION DATA

In all empirical chapters of the dissertation, I conduct quantitative analyses of a nationally representative dataset, the restricted-use Educational Longitudinal Study of 2002 (ELS:2002), from the National Center for Education Statistics (National Center for Education Statistics, Institute of Education Sciences 2015b). The ELS:2002 sample includes approximately 16,200

students in 750 schools who were 10th graders in 2002. Samples were drawn using a two-stage design; schools were sampled first using a probability proportional to size sampling technique, and students within schools were subsequently sampled via random sampling. As a longitudinal dataset, the ELS:2002 includes multiple waves of data for analysis: 1) Base-year data from students in 10th grade in 2002; 2) Data from the first follow-up in 2004, two years after 10th grade (12th grade); 3) Data from the second follow-up in 2006, four years after 10th grade (i.e. postsecondary years); 4) Data from the third follow-up in 2012, ten years after 10th grade (i.e. postsecondary and young adult years). In the second and fourth chapter of the dissertation, I analyze the base-year ELS:2002 data. In the third chapter, I analyze the base-year and first follow-up data to examine Mexican origin dropout patterns. In future analyses, I plan to analyze data from the second and third follow-up, in order to characterize the postsecondary experiences of Mexican origin youth.

The ELS:2002 dataset includes information on student nativity, parent nativity, and Mexican Hispanic ethnic identification, which allows me to identify Mexican origin adolescents and fractional immigrant generational groups. The ELS:2002 also includes baseline student background information from both student and parent baseline surveys. This information helps to capture social origins and the academic risk profile of students in 10th grade and prior to 10th grade, which are used as control variables throughout the analysis.

Finally, the restricted-use ELS:2002 dataset includes information on school racial/ethnic and socioeconomic compositional characteristics. Some of these measures come from externally linked school-level data from the Common Core of Data (CCD). NCES annually collects fiscal and non-fiscal data on public schools, school districts, and state education agencies, and makes

this information available to researchers and the public via the CCD.[2] The ELS:2002 includes a measure of the percent of minority student in the school from the CCD. However, the dataset does not include measures of the percent of specific racial/ethnic groups in the school. To address this issue, I merge in data from the 2001-2002 Public School Universe Survey and Private School Universe Survey (National Center for Education Statistics, Institute of Education Sciences 2015c, 2015d). These datasets include counts of specific racial/ethnic groups, which allows me to calculate the percent of students of the same-race/ethnicity in the school. Finally, I create an aggregate measure of peer socioeconomic status in the school using in-sample student socioeconomic characteristics. These measures are discussed in greater detail in each dissertation chapter.

Table 1.1 displays the mean background characteristics of students in the ELS:2002 base-year sample by student race/ethnicity. Mexican origin Latinos make up approximately 11.0% of all 10th graders—the largest immigrant minority subgroup in the population. Over half of Mexican origin youth live in immigrant households—they are foreign-born youth themselves (first generation), or are U.S.-born youth with at least one foreign-born parent (second and 2.5 generation). Nearly one-third of Mexican origin youth are members of the third and higher generation—they are U.S.-born youth with U.S.-born parents who continue to identify as Latinos of Mexican origin.

Mexican origin youth have the most disadvantaged social origins of any racial/ethnic group in the ELS:2002. Mexican origin youth have the lowest mean household socioeconomic index score (-.551), even relative to non-Latino blacks (-.248). Approximately 28.6% of parents of Mexican origin 10th graders have not attained a high school degree, compared to only 6.4% of

[2] State education agencies provide this data to NCES.

the parents of all 10th graders. Most Mexican origin youth also live in households with extremely limited financial resources relative to the overall 10th grade population. Nearly three-quarters of Mexican origin youth live in a household where the annual family income is $50,000 a year or less, and one-quarter of all Mexican origin youth live in a household where the total annual family income is less than $20,000 a year. In contrast, approximately half of all 10th graders in the ELS:2002 live in households with total family household incomes less than $50,000, and one-third of all 10th grade households could be categorized as "middle-class," with an annual household income of $50,001-$100,000. Disadvantaged social origins are likely to contribute to Mexican origin students' disproportionate enrollment in high-minority, high-poverty schools, and could also influence their risk of dropout and school disengagement.

The family composition of Mexican origin youth is similar to the family composition of the overall 10th grade population. The majority of Mexican origin youth live in households where two biological or adoptive parents are present. For most Mexican origin youth in the ELS:2002, the race/ethnicity of the parent who filled out the base-year parental survey was Latino/a. However, nearly 10% of Mexican origin youth had a non-Latino white parent who filled out the questionnaire.

The geographic characteristics of the schools attended by Mexican origin youth reflect general patterns of residential settlement among immigrant origin populations in the United States. Immigrant families tend to be drawn into central cities in metropoltan areas through employment opportunities and immigrant networks (Portes and Rumbaut 2006). For this reason, it is unsurprising that nearly half (47.2%) of Mexican origin 10th graders attend schools located in central city areas of mid- to large-size cities. Approximately 40-50% of Other Latino, black, and Asian students also attend schools in central cities areas. In comparison, only 19.6% of NL

white students attend schools in central cities. Despite the rise of "new" rural immigrant destinations (Zuniga and Hernandez-Leon 2005), fewer than 2.0% of all Mexican origin 10th graders attend schools located in large towns, small towns, and in rural areas. The vast majority of all 10th grade students (92.4%) attend public schools, but public school attendance is highest among Mexican origin (96.7%) and black (97.3%) youth.

In the next chapter, I analyze how Mexican origin youth are distributed across schools by peer racial/ethnic and socioeconomic composition. In Chapter 3, I analyze the association between school racial/ethnic and socioeconomic composition and dropout among Mexican origin youth. In Chapter 4, I evaluate the relationship between school racial/ethnic and socioeconomic composition and Mexican origin school engagement patterns.

Table 1.1. Sample Characteristics by Race/Ethnicity, Base-Year ELS:2002 Sample (Weighted)

			Latino (Any Race)				Non-Latino							
	Full Sample		Mexican Origin		Other		White		Black		Asian		Other Race	
	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error
Race/Ethnicity														
Mexican Origin Latino	11.0%	0.8%	100.0%	0.0%	na		na		na		na		na	
Latino-Other	4.9%	0.3%	na		100.0%	0.0%	na		na		na		na	
NL White	60.2%	1.0%	na		na		100.0%	0.0%	na		na		na	
NL Black	14.4%	0.7%	na		na		na		100.0%	0.0%	na		na	
NL Asian	3.9%	0.3%	na		na		na		na		100.0%	0.0%	na	
NL Other Race	5.5%	0.3%	na		na		na		na		na		100.0%	0.0%
Immigrant Generation														
3rd +	69.1%	0.7%	31.2%	2.1%	34.3%	2.7%	82.5%	0.6%	72.5%	1.4%	8.8%	1.5%	64.4%	2.2%
2nd/2.5	11.1%	0.4%	34.2%	1.8%	28.7%	2.2%	4.4%	0.3%	6.3%	0.8%	39.8%	1.9%	14.1%	1.5%
1.75	2.6%	0.2%	7.6%	0.8%	5.4%	1.0%	0.9%	0.2%	1.1%	0.2%	15.2%	1.3%	2.8%	0.6%
1st/FB Other	4.5%	0.3%	13.8%	1.2%	16.2%	1.8%	1.2%	0.2%	2.9%	0.5%	23.1%	1.7%	2.6%	0.6%
Missing Gen. Status	12.4%	0.5%	12.9%	1.1%	15.0%	1.8%	10.8%	0.6%	16.8%	1.1%	11.9%	1.4%	16.1%	1.5%
Socioeconomic Status														
Household SES Composite	-0.008	0.014	-0.551	0.032	-0.263	0.033	0.170	0.015	-0.248	0.019	0.033	0.046	-0.053	0.027
Parental Education														
Less than HS	6.4%	0.4%	28.6%	1.9%	11.2%	1.3%	2.2%	0.2%	4.7%	0.5%	10.7%	1.2%	4.7%	1.0%
HS Degree or GED	20.8%	0.5%	22.3%	1.3%	24.9%	1.8%	20.3%	0.6%	22.7%	1.0%	13.7%	1.1%	19.5%	1.6%
Some College	23.8%	0.4%	22.0%	1.3%	25.6%	1.9%	23.0%	0.5%	28.6%	1.2%	14.9%	1.6%	29.4%	2.0%
College Degree (2 yr.)	11.3%	0.3%	9.4%	0.9%	9.3%	1.3%	11.7%	0.5%	12.9%	0.9%	7.3%	0.9%	11.0%	1.3%
College Degree (4 yr.)	21.8%	0.5%	11.8%	1.2%	18.1%	1.8%	24.1%	0.6%	19.3%	1.0%	29.3%	1.8%	20.7%	1.8%
More than 4 yr. College	15.9%	0.5%	6.0%	0.7%	10.9%	1.2%	18.7%	0.7%	11.9%	0.8%	24.2%	2.1%	14.7%	1.3%
Family Income														
<=$20,000	14.6%	0.5%	24.9%	1.7%	21.9%	1.8%	8.3%	0.4%	28.1%	1.3%	20.0%	1.7%	17.1%	1.6%
$20,001-50,000	38.5%	0.6%	50.0%	1.8%	44.6%	2.3%	34.3%	0.7%	44.8%	1.2%	36.2%	1.8%	40.6%	1.9%
$50,001-100,000	33.7%	0.6%	18.9%	1.5%	25.9%	2.1%	40.4%	0.7%	21.3%	1.2%	27.9%	1.7%	32.2%	1.9%
$100,001 +	12.9%	0.5%	4.7%	0.8%	7.4%	1.1%	16.8%	0.7%	5.1%	0.5%	14.6%	1.6%	9.7%	1.3%
Family Composition														
Intact	56.8%	0.6%	58.0%	1.5%	45.4%	2.3%	63.6%	0.7%	31.5%	1.3%	71.8%	1.7%	46.3%	2.1%
Stepparent	16.7%	0.4%	16.5%	1.2%	21.3%	2.1%	16.0%	0.5%	18.0%	1.0%	11.7%	1.3%	20.0%	1.5%
Mother Only	19.0%	0.4%	17.3%	1.3%	24.3%	1.9%	14.2%	0.5%	39.7%	1.4%	9.6%	0.9%	22.9%	1.6%
Other	7.5%	0.3%	8.3%	0.8%	8.9%	1.4%	6.1%	0.4%	10.8%	0.8%	7.0%	0.9%	10.8%	1.4%
Parent Race/Ethnicity														
NL White	56.3%	0.9%	9.0%	1.0%	13.0%	1.6%	85.7%	0.6%	1.4%	0.3%	9.7%	1.4%	45.2%	2.5%
NL Black	12.1%	0.6%	1.2%	0.3%	5.2%	0.9%	0.0%	0.0%	77.0%	1.1%	0.1%	0.1%	11.0%	1.4%
NL Asian	3.4%	0.2%	0.2%	0.1%	0.4%	0.2%	0.1%	0.0%	0.1%	0.1%	73.1%	1.9%	6.4%	1.0%
NL Other Race	2.3%	0.2%	0.3%	0.1%	1.2%	0.4%	1.3%	0.2%	2.0%	0.4%	3.1%	0.6%	18.2%	2.6%
Latino	12.2%	0.7%	75.8%	1.6%	63.0%	2.4%	0.8%	0.1%	1.2%	0.3%	0.9%	0.3%	1.2%	0.5%
Missing	13.7%	0.5%	13.5%	1.1%	17.2%	1.8%	12.0%	0.6%	18.4%	1.1%	13.1%	1.5%	18.1%	1.5%

Table 1.1. (Cont'd.)

			Latino (Any Race)				Non-Latino							
	Full Sample		Mexican Origin		Other		White		Black		Asian		Other Race	
	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error
School Urbanicity and Place Size														
Central City, Large City	13.7%	1.1%	21.1%	3.2%	32.3%	3.4%	6.0%	0.7%	30.3%	3.1%	26.4%	3.1%	14.0%	1.8%
Central City, Mid-size City	16.0%	1.2%	26.1%	4.7%	13.0%	2.4%	13.6%	1.2%	19.8%	2.8%	17.1%	3.0%	13.5%	2.3%
Urban Fringe, Large City	29.1%	1.4%	34.3%	4.1%	35.6%	3.6%	28.4%	1.7%	22.7%	2.4%	41.5%	3.1%	27.5%	2.5%
Urban Fringe, Mid-size City	8.9%	1.0%	3.9%	1.4%	6.5%	1.3%	10.9%	1.3%	6.0%	1.2%	3.7%	0.9%	10.9%	1.9%
Large Town	1.4%	0.5%	1.8%	1.2%	0.1%	0.1%	1.7%	0.6%	0.7%	0.4%	1.6%	0.8%	0.6%	0.3%
Small Town	9.8%	1.1%	5.2%	1.7%	2.1%	0.6%	11.9%	1.4%	9.3%	1.7%	2.1%	0.6%	9.9%	2.4%
Rural	21.0%	0.9%	7.2%	1.4%	10.3%	2.2%	27.5%	1.3%	11.1%	1.6%	7.5%	1.5%	23.3%	3.0%
Missing	0.1%	0.1%	0.3%	0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
School Sector														
Public	92.4%	0.3%	96.7%	0.6%	93.9%	1.0%	90.4%	0.5%	97.3%	0.4%	91.4%	1.5%	91.8%	1.1%
Catholic	4.2%	0.2%	2.5%	0.5%	4.1%	0.8%	5.2%	0.3%	1.8%	0.3%	4.1%	0.9%	3.7%	0.7%
Other Private	3.4%	0.2%	0.8%	0.2%	2.0%	0.7%	4.4%	0.4%	0.9%	0.2%	4.5%	1.2%	4.6%	0.9%
n	16200		1460		760		8680		2020		1400		930	

CHAPTER 2: INTEGRATION OR ISOLATION? EXPLAINING GAPS IN SCHOOL RACIAL/ETHNIC AND SOCIOECONOMIC COMPOSITION AMONG MEXICAN ORIGIN AND NON-LATINO WHITE YOUTH

I. INTRODUCTION

Mexican origin adolescents are one of the most disadvantaged racial/ethnic subgroups in U.S. schools. Mexican origin adolescents and young adults exhibit substantial educational gaps with non-Latino white youth, including higher rates of school dropout (Hirschman 2001; Landale et al. 1998), lower rates of college preparedness (Schneider et al. 2006), and lower rates of college enrollment among high school graduates (Fry 2002). Researchers have cited Mexican origin student isolation in high-poverty, high-minority schooling contexts as a potential explanation for their educational disadvantages (Crosnoe 2005; Portes and Rumbaut 2001). For example, Portes and Rumbaut (2001) argue that the "challenge confronting children of immigrants is the social context they encounter in American schools and neighborhoods may promote a set of undesirable outcomes such as dropping out of school, joining youth gangs, or participating in the drug subculture" (59).

Few prior studies, however, examine levels of racial/ethnic or socioeconomic isolation among Mexican origin youth in schools. Data limitations associated with identifying Mexican origin status in counts of student racial/ethnic groups present a challenge for quantifying Mexican origin school segregation or isolation patterns. An even more concerning issue, however, is a lack of inquiry into why Mexican origin youth disproportionately attend high-minority, high-poverty schools relative to their non-Latino white peers. To be sure, few prior studies evaluate how background factors related to processes of socioeconomic and spatial assimilation—nativity, duration of residence, socioeconomic status, and community of

residence—influence the school compositional characteristics of Mexican origin youth (but see Crosnoe 2005). The Mexican origin population exhibits substantial within-group heterogeneity in patterns of incorporation (Alba, Jiménez, and Marrow 2013), and it is possible that Mexican origin youth who have higher levels of socioeconomic and spatial assimilation attend schools that are less racially, ethnically, and socioeconomically isolated than their peers who are new migrant arrivals in living in impoverished households in immigrant enclaves.

In this dissertation chapter, I use the restricted-use Educational Longitudinal Study of 2002 (ELS:2002) to analyze the racial/ethnic and socioeconomic composition of schools attended by Mexican origin high school students. I focus on three dimensions of school composition: The percent of non-minority students in the school, the percent of same-race/ethnicity students in the school, and the average socioeconomic status of students in the school. I first provide a descriptive assessment of the distribution of Mexican origin youth across schools by the racial/ethnic and socioeconomic composition of students in the school. I then investigate whether gaps in school compositional characteristics between Mexican origin youth and their white peers can be explained by factors related to the process of assimilation.[3]

I draw from theories of immigrant assimilation and neighborhood locational attainment to develop hypotheses about the factors that should influence Mexican origin school compositional gaps with white students. The *assimilation hypothesis* proposes that Mexican origin youth whose families have higher levels of socioeconomic and spatial incorporation—as measured by nativity, duration of residence, socioeconomic status, and characteristics of place of residence—will have school compositional characteristics that more closely resemble those of white students. In contrast, the *racial stratification hypothesis* argues that mechanisms of racial

[3] For the sake of brevity, I refer to non-Latino white youth as "white" in the remainder of this analysis.

discrimination prevent Mexican origin youth from enrolling in schools with higher concentrations of non-minority, non-Latino/a, and non-poor students. In this scenario, gaps in school compositional characteristics between Mexican origin and white youth persist after measures of acculturation and assimilation are taken into account.

My analysis provides insight into levels of Mexican origin *exposure* to peers with particular racial/ethnic and socioeconomic characteristics by using survey sample data from the ELS:2002. While research on school segregation and isolation patterns among Latino/a students informs my work, my analysis does not provide aggregate measures of school *segregation* or *exposure/isolation* among Mexican origin students across schools. Such an analysis would require counts of Mexican origin youth across all schools and districts, which are not currently available in data from the National Center for Education Statistics (NCES).

In other words, the peer compositional measures used in my analysis do not directly represent Mexican origin school *segregation* patterns. Measures of *segregation*, such as the index of dissimilarity, quantify the degree to which students are sorted evenly or unevenly across units such as schools and neighborhoods (Massey and Denton 1988). Segregation is not a school-level attribute, but rather is an aggregate measure that describes the extent to which students are spread evenly across units within a larger unit, such as schools within a school district or a metropolitan area. My analysis uses peer characteristics within schools in the ELS:2002 sample to represent Mexican origin *exposure to* racial/ethnic and socioeconomic groups within a school.

These school characteristics may be the result of segregation, but may also be due to the composition of the local population (Fiel 2013). For instance, a typical Mexican origin youth living in a metropolitan area with 50% of students that are Latino/a with no segregation across

schools would attend a school where 50% of fellow students are Latino/a. This exposure to co-ethnics would not be due to segregation, but to the demographic composition of the local area. However, the school compositional characteristics in my analysis are likely partially the result of school segregation, given high levels of Latino-white segregation across schools (Orfield et al. 2012).

In the next section, I review the prior research on school segregation and isolation patterns among Mexican origin and Latino/a youth. I then discuss the two frameworks that guide my analysis of school compositional gaps between Mexican origin and white youth: The *assimilation* perspective and the *racial stratification* perspective.

II. BACKGROUND

Mexican Origin Racial/Ethnic and Socioeconomic School Segregation, Exposure, and Isolation Patterns

Few prior studies have investigated school racial/ethnic and socioeconomic segregation, exposure, or isolation patterns among Mexican origin youth as a national origin group of interest. Data constraints are the main reason for a lack of knowledge in this area. The National Center for Education Statistics (NCES) provides counts of racial/ethnic groups and students receiving free and reduced price lunch in schools through datasets such as the Common Core of Data Public School Universe Survey. These counts are used to calculate nationally aggregated measures of school segregation, exposure, and isolation. Schools and school districts only collect data on Latino/a ethnic status, but do not collect data on student or parental country of origin or Latino/a subgroup (Mexican origin, Cuban, Puerto Rican, etc.). In this way, Mexican origin youth are subsumed within the broader pan-ethnic Latino/a population in NCES counts used to generate aggregate school segregation, exposure, and isolation measures.

Beyond data limitations, studies of Latino/a-white school segregation, exposure, and isolation are somewhat scarce in comparison to studies of black-white school segregation. There are several reasons why Latino-white school segregation and exposure patterns have not garnered as much scholarly attention as black-white school segregation patterns. Black-white school segregation and isolation patterns have been at the forefront of scholarly interest in the wake of *Brown v. Board of Education,* the era of *de jure* desegregation, and recent patterns of black-white re-segregation as formal desegregation policies have been rescinded (see Orfield and Eaton 1996; Reardon et al. 2012; Reardon and Owens 2014). Latinos were not a major target of school desegregation efforts (Orfield and Eaton 1996; Orfield et al. 2012). In contrast to black students, Latino/a students have not experienced "re-segregation" from whites, but rather high and slowly declining rates of school segregation over the past few decades (Orfield et al. 2012).

Black-white school segregation patterns are also framed in terms of a legacy of racial discrimination, whereas Latino-white school segregation patterns are considered an outcome of the process of migration. Researchers and policymakers may assume that Latino-white school segregation patterns will subside as Latino/as become assimilated into U.S. society. I specifically test this proposition in my analysis.

Given that the Mexican origin population makes up approximately two-thirds of the Latino/a population (Gonzalez-Barrera and Lopez 2013), some insight into Mexican origin school segregation, exposure, and isolation patterns can be gleaned from studies that subsume Mexican origin students within the broader pan-ethnic Latino/a population. Before discussing these studies, however, it is important to define and differentiate measures of school *segregation* from measures of *exposure* or *isolation*.

School *segregation* represents the degree to which members of two groups are spread equally across schools within a macro-level unit such as a school district, a metropolitan area, or the country at large. The index of dissimilarity is one key measure of segregation (Massey and Denton 1988). The index of dissimilarity ranges from 0.0 to 1.0. For school segregation, an index of dissimilarity value of 0.0 would depict a situation where two groups are distributed equally across all sub-units (schools) within a larger unit (such as a school district). An index of dissimilarity value of 1.0 would indicate that two groups are perfectly segregated—they do not attend the same schools.

Exposure connotes the degree to which an individual is likely to interact with members of a particular group (Massey and Denton 1988). Measures of *exposure* indicate the proportion or percentage of members of a group that a typical student from a given group will encounter in the school/s that he/she attends. *Isolation* refers to *exposure to members of one's own group*. While school segregation and isolation may go hand-in-hand, it is possible to have situations of low racial segregation but high racial isolation. Students from two racial groups may be spread evenly across schools, but one group may compose a larger proportion of the student population than the other group. In this situation, all students would have greater exposure to the numerical majority racial group than the numerical minority racial group. However, given that no state in the country has an index of Latino-white dissimilarity value of 0.0 (Orfield et al. 2012), a portion of Latino/a exposure to minority students must be attributed to segregation.

Research on Latino-white segregation shows that Latino/as have become slightly more evenly dispersed across schools in the last few decades, as measured by the index of dissimilarity. The Latino/a-white dissimilarity index declined from .75 to .69 from 1991 to 2009 (Orfield et al. 2012). However, the dissimilarity value of .69 in 2009 implies that 69% of

Latino/a or white students would need to move to a different school in order to ensure an even distribution of Latino/a and white students across schools. While school segregation levels among Latino/a students has decreased, Latino/a exposure to whites has declined and their isolation with minority and co-ethnic students increased over the past two decades (Fiel 2013; Krogstad and Fry 2014; Orfield et al. 2012). Decreasing Latino/a exposure to whites and increasing exposure to co-ethnic Latino/as may be partially due to segregation, but may also be attributed to the growth of the Latino school-age population over the past few decades (Johnson and Lichter 2010).

The racial/ethnic isolation of Latino/a students in schools is also paired with socioeconomic isolation. During the 2009-2010 academic year, the typical Latino/a student attended a school where 57.2% of the student body was Latino/a, and 63.5% of students were from households in poverty (Orfield et al. 2012). In that year, black students had similar levels of socioeconomic isolation with Latinos, whereas the typical white student attended a school where 37.0% of students were poor.

Latino/a suburbanization and dispersion to new destinations could increase opportunities for some Mexican origin youth to have greater exposure to non-minority and non-poor students in schools. Latino/a suburbanization has increased over time (Timberlake et al. 2010), and Latino/a families have been increasingly drawn into communities outside of traditional immigrant gateways in recent decades (Johnson and Lichter 2010; Massey 2008; Zuniga and Hernandez-Leon 2005). The schools attended by Latino/as in new destinations areas have lower concentrations of minority and poor students than those in established gateways (Fry 2011).

The impact of suburbanization and dispersion to new immigrant gateways on Mexican origin exposure to non-minority and non-poor students, however, is limited. Only 23% of the

Mexican origin adolescent population lives outside of the top five established gateways of California, Texas, Illinois, Arizona, and Colorado (author's calculations based on American Community Survey data, 2005-2009). Additionally, the increasing suburbanization of minorities has been commensurate with increasing school racial segregation in suburban areas (Reardon and Yun 2001).

Perhaps more concerning than a lack of information on Mexican origin school segregation and exposure patterns is a dearth of information on why Mexican origin youth are isolated in high-minority, high-poverty schools. Few prior studies have evaluated the determinants of school compositional characteristics among Mexican origin youth (but see Crosnoe 2005). Mexican origin adolescents and their families are in varying stages of the process of socioeconomic and spatial incorporation and assimilation. Those who have higher degrees of assimilation may close gaps in school compositional characteristics with their white peers. However, mechanisms of discrimination and racialization may keep Mexican origin youth isolated in high-minority, high-poverty schools-—even those with greater socioeconomic resources and higher degrees of spatial assimilation. In the next section, I discuss the *assimilation* and *racial stratification* perspectives for explaining Mexican origin school compositional characteristics.

Mexican Origin Isolation in High-Minority, High-Poverty Schools: Assimilation Versus Racial Stratification Perspectives

For Mexican origin youth, processes related to the experience of immigration and incorporation shape the risk of attending a high-minority, high-poverty school. Theories of immigrant assimilation and locational attainment speak directly to how youth should be sorted across schools according to their racial/ethnic background, immigrant generational status, socioeconomic resources, and residential attainment patterns. These theories offer two

competing perspectives on school racial/ethnic and socioeconomic compositional gaps between Mexican origin youth and their white peers.

According to the *assimilation* perspective, Mexican origin youth will attend schools that more closely resemble those of their white peers—schools with lower concentrations of poor and minority students—as they gain exposure to U.S. society and experience socioeconomic and neighborhood assimilation. In contrast, the *racial stratification* perspective argues that Mexican origin families will be blocked from sending their children to schools with lower proportions of minority and poor students because of racial discrimination.

Mexican Origin School Compositional Characteristics: The Assimilation Perspective

The *assimilation* perspective posits that school compositional gaps between Mexican origin and white youth can mainly be attributed to factors related to the process of immigration and incorporation. The Mexican origin population includes both immigrant newcomers and the U.S.-born children of U.S.-born parents that continue to identify as Mexican origin Latino/as. The *assimilation perspective* proposes that Mexican origin families will experience socioeconomic and residential assimilation through increased exposure to U.S. society and its institutions (Alba and Nee 2009; Warner and Srole 1945), which is often measured according to immigrant generational status (Rumbaut 2004).

Foreign-born immigrant families are often "pulled" into immigrant enclaves through co-ethnic social networks that provide information about employment and housing, and ease the process of acculturation Portes and Rumbaut (2006). However, immigrants and their descendants should begin to move outside of these enclaves with gains in English proficiency, exposure to local institutions, human capital, and socioeconomic resources, in order to take advantage of a broader range of educational and economic opportunities (Alba and Nee 2009;

Warner and Srole 1945). With each immigrant generation, socioeconomic standing should improve, and isolation in high-poverty, high-minority neighborhoods should decline, among Mexican origin families.

Socioeconomic and residential assimilation among Mexican origin families should directly translate into school compositional assimilation between Mexican origin and white youth in two ways. First, socioeconomic assimilation among Mexican origin families should facilitate residential assimilation into school catchment areas that feed into schools with lower proportions of minority and poor students. The spatial assimilation theory predicts that racial/ethnic minorities, including immigrant minorities, will move into whiter and less impoverished neighborhoods with increases in education and income (Charles 2003). For immigrants and their descendants, spatial assimilation is expected to be part and parcel of the overall processes of acculturation and assimilation (Alba and Nee 2009).

Spatial assimilation across neighborhoods should allow Mexican origin children to attend lower poverty, lower minority schools. Over 70% of students in the U.S. attend schools that correspond with neighborhood catchment or "feeder" areas established by school districts (Grady, Bielick, and Aud 2010). For families whose children attend assigned public schools, school "choice" is achieved through the residential attainment process (see Lareau and Goyette 2014). Mexican origin children whose families have experienced spatial assimilation into neighborhoods should also exhibit a degree of assimilation into schools according to the racial/ethnic and socioeconomic composition of the school.

Second, the process of socioeconomic assimilation could help Mexican origin families to take advantage of school choice options, such as private schools, magnet schools, or charter schools. Mexican origin families who have a greater degree of socioeconomic assimilation may

have more knowledge of local schooling options outside of the school catchment area and/or may have an increased ability to enroll their children in private schools.

It is unclear, however, whether school choice options will facilitate Mexican origin exposure to white and non-poor students. Latino-white segregation in private schools is lower than Latino-white segregation in public schools (Reardon and Yun 2002). Nonetheless, the presence of charter and magnet schools have been linked to increased racial/ethnic school segregation and minority student isolation in schools (Bifulco, Ladd, and others 2007; Frankenberg, Siegel-Hawley, and Wang 2010; Saporito and Sohoni 2006). Overall, residential assimilation, rather than school choice, is likely to serve as a key means for Mexican origin youth to gain access to school settings with lower concentrations of minority and poor students.

There is evidence that the Mexican origin population exhibits a degree of socioeconomic and residential assimilation, which should facilitate enrollment in schools with higher proportions of white and non-poor students among some Mexican origin youth. Foreign-born Mexican origin adults, the potential parents of some Mexican origin youth, have extremely low levels of educational attainment and household incomes relative to immigrants from other countries of origin . Additionally, only 1-in-4 foreign-born Mexican immigrants is a U.S. citizen (Passel, Cohn, and Gonzalez-Barrera 2012), and approximately 47% of all second-generation Mexican origin youth has at least one unauthorized parent (author's calculations based on Passel 2011: Table 4). While the Mexican origin first generation starts out in a socioeconomically disadvantaged position, the Mexican origin population makes clear gains in educational attainment and income between the foreign-born first generation and the U.S.-born second generation (Bean and Stevens 2003; Farley and Alba 2002; Telles and Ortiz 2008).

However, several studies show that socioeconomic gains stagnate or reverse between the Mexican second and third and higher generations, and point to gaps in educational attainment and wages between third and higher generation Mexican origin and non-Latino white adults (Bean and Stevens 2003; Duncan and Trejo 2007, 2011; Groger and Trejo 2002; Telles and Ortiz 2008). Some researchers view this pattern as evidence of "stagnation" or "decline" in Mexican origin socioeconomic assimilation pattern (Telles and Ortiz 2008). Other researchers argue that Mexican origin socioeconomic assimilation may be occurring at a slower pace than for other immigrant groups (Bean and Stevens 2003), or that socioeconomic gains among the third and higher generations cannot be fully observed due to the lower propensity of U.S.-born Mexican-descent individuals with mixed ancestry (via intermarriage) to identify as Mexican origin Latino/as in survey data (Duncan and Trejo 2007). In sum, U.S.-born Mexican origin youth born to U.S.-born parents may attend more integrated schools than their foreign-born counterparts or those who are U.S.-born with foreign-born parents, but they may not exhibit complete parity in school compositional characteristics with white youth because their families do not achieve full socioeconomic parity with white third and higher generation households.

While there is mixed evidence of socioeconomic assimilation among third and higher generation Mexican origin families, Latino/as do show some evidence of spatial assimilation in neighborhoods. Latino-white residential segregation is lower among U.S.-born Latinos relative to foreign-born Latinos (Iceland and Nelson 2008; Iceland and Scopilliti 2008). Latino-white neighborhood segregation is also lower in metropolitan areas where the Latino population is more acculturated and assimilated, as measured by the proportion of Latinos in the area that speak English very well, the proportion of Latinos that are homeowners, and the degree of income parity between Latinos and whites (Iceland and Nelson 2008).

Latinos with increased levels of income, educational attainment, and English fluency, as well as those with native-born status, live in neighborhoods with higher percentages of whites than other Latinos (Alba and Logan 1993). Among Latinos that engage in residential mobility, those with greater English fluency, native-born status, higher educational attainment, and higher family income move into census tracts with greater percentages of white residents relative to their peers (South, Crowder, and Chavez 2005b, 2005c). However, Latino/as do not necessarily experience equal residential outcomes with whites. South, Crowder, and Chavez (2005a), for instance, show that Mexican origin adults are less likely than white adults to move out of higher-poverty census tracts into a lower-poverty census tracts, even after controlling for background factors related to socioeconomic status.

Taken together, these research findings suggest that Mexican origin youth whose families have experienced a degree of socioeconomic and spatial assimilation should attend schools with lower proportions of minority and poor peers. It is uncertain, however, whether this level of socioeconomic and residential assimilation will be sufficient for Mexican origin youth to achieve parity in schooling characteristics with white students.

The *racial stratification* hypothesis argues that mechanisms of discrimination will prevent Mexican origin adolescents from achieving parity in school compositional characteristics with whites by blocking opportunities for full socioeconomic and residential assimilation. This hypothesis is discussed in detail below.

Mexican Origin School Composition: The Racial Stratification Perspective

The *racial stratification* perspective highlights how perceived racial/ethnic differences between Mexican origin Latino/as and whites may trigger mechanisms of discrimination that will prevent Mexican origin youth from gaining access to schools where they have greater exposure

to white and non-poor peers. Some researchers have argued that discrimination in educational and labor markets leads to "downward assimilation" (Portes and Rumbaut 2001; Portes and Zhou 1993; Zhou 1997a, 1997b)

or "generational stagnation or decline" (Gans 1992; Telles and Ortiz 2008) among the Mexican origin population. Even if they do experience socioeconomic assimilation, discrimination in housing markets may block Mexican origin families from converting socioeconomic gains into residence in school catchment areas that feed into schools with lower concentrations of minority and poor students (Charles 2003; Massey and Denton 1993).

The segmented assimilation theory (Portes and Rumbaut 2001; Portes and Zhou 1993; Zhou 1997a, 1997b) and the racialization theory (Massey 2007; Telles and Ortiz 2008) both argue that Mexican origin immigrants and their descendants do not assimilate socioeconomically to the U.S. "mainstream," but instead become incorporated into the bottom rungs of racialized socioeconomic hierarchies. Both sets of theories argue that Mexican immigrants and their descendants are a racialized group in U.S. society, similar to African Americans, which makes them the targets of discrimination. These researchers point to lingering gaps in schooling and socioeconomic outcomes between U.S.-born Mexican origin youth and adults and their U.S.-born immigrant origin peers or their U.S.-born white peers as evidence of the effects of discrimination on Mexican origin patterns of assimilation.

Even if they do attain socioeconomic mobility with each generation, Mexican origin families may still encounter obstacles to residential spatial assimilation in local housing markets. The place stratification theory of residential segregation proposes that individual and institutional mechanisms of discrimination prevent non-whites from converting gains in human capital into residence in higher-quality neighborhoods (Charles 2003; Massey and Denton 1993). In housing

markets, minorities face the legacy of legally sanctioned racial/ethnic housing discrimination, including restrictive housing covenants, redlining, and lending discrimination (Massey and Denton 1993). While the Fair Housing Act (1968) officially bans housing discrimination based on racial/ethnic status, audit studies have shown that minorities have encountered racial steering by realtors, unequal treatment by landlords in the availability of rentals and terms of rental transactions, and a lack of credit assistance in sales markets (Galster 1990; Galster and Godfrey 2005; Yinger 1995). Place stratification implies that Mexican origin families, even those with greater socioeconomic resources, may be unable to enroll their children in more integrated schools because they are unable to access school catchment areas that feed into integrated schools.

Logan and Alba (1993) have revised the place stratification model to include a "strong" and a "weak" version. In the "strong" version, minorities receive few to no locational returns to advancements in human capital—they are completely blocked from attaining residence in areas with lower levels of minority and poor residents. In the "weak" version of the place stratification model, minorities receive comparable or higher locational returns to human capital advancements relative to whites. However, minorities may still fail to attain parity in neighborhood characteristics with whites, because low-SES whites still live in more advantaged neighborhoods than low-SES minorities. In this situation, a given increase in household socioeconomic status may have a similar or higher rate of return in terms of access to higher quality neighborhoods for both minorities and whites, but minorities do not achieve parity with whites in neighborhood characteristics because they start out in different initial positions (i.e. they have different intercepts). For example, both Mexican origin youth and non-Latino white youth could access less impoverished schools with increases in household socioeconomic status.

However, low-SES Mexican origin youth may in schools that have higher levels of concentrated poverty than low-SES whites. In this situation, Mexican origin youth would need to receive a higher return to advancements in household SES to achieve parity in school poverty levels with their non-Latino white peers of similar socioeconomic standing.

It is difficult to test the *racial stratification* perspective directly, given a lack of measures of discrimination or racialization. Instead, researchers argue that discrimination is at play when they observe lingering educational disparities between Mexican origin youth and their immigrant origin peers (Portes and Rumbaut 2001) or find limited evidence of socioeconomic assimilation among the Mexican immigrant third and higher generations (Telles and Ortiz 2008) that cannot be fully explained by observable background factors.

Disparities in school compositional characteristics between Mexican origin children and their peers may not be solely attributed to observable factors such as household socioeconomic status. Using Early Childhood Longitudinal Study-Kindergarten Cohort, Crosnoe (2005) constructs a propensity-score matched sample in order to investigate whether Mexican origin children in elementary schools are more likely to attend schools with high proportions of minority and poor students relative to students with similar socioeconomic background characteristics. He finds that Mexican origin children of immigrants attend elementary schools that are more racially and socioeconomically isolated relative to peers with comparable socioeconomic background characteristics. Additionally, Mexican origin children of immigrants are more likely to attend schools with other problematic characteristics, such as schools with higher proportions of less experienced teachers and schools located in disorganized community locations. Crosnoe's work suggests that Mexican origin students face greater barriers to enrolling in schools with lower concentrations of minority and poor students than their peers.

School Composition and Mexican Origin Youth: Opportunity Structures for Integration

School compositional characteristics are not merely the sum of processes occurring at the level of the family, but are also shaped by the demographic and structural conditions of the local context of schooling. Prior research shows that the characteristics of communities and school districts shape the overall opportunity structure for neighborhood and school integration. For example, Mexican origin youth may have few opportunities to attend schools with white and non-poor students if they live in metropolitan areas where Latinos compose a high proportion of the local population, even if there is no segregation in these areas (Fiel 2013).

School assignment policies, school locations, and the geographic boundaries of school catchment areas may also influence school compositional patterns through school segregation processes. School districts can no longer assign students to schools based on racial/ethnic background, as districts have been released from mandated desegregation orders and courts have struck down the use of race in school assignment decisions (Orfield and Eaton 1996; Orfield et al. 2012; Reardon et al. 2012). The opportunity for students to attend schools with a particular racial/ethnic or socioeconomic make-up will thus be contingent on specific school assignment policies within districts.

Between-district school segregation has also become an increasingly important component of school segregation patterns within metropolitan areas over the past decades (Logan, Oakley, and Stowell 2008; Reardon and Yun 2001; Reardon, Yun, and Eitle 2000). Between-district school segregation is higher in metros with many small school districts, and in metros where school district boundaries do not cross city-suburban lines (Logan et al. 2008; Reardon and Yun 2001). Mexican origin students living in metropolitan areas with higher levels

of between-district segregation may have fewer opportunities to access less racially/ethnically isolated and impoverished schools.

While local conditions shape opportunities for contact between racial/ethnic and socioeconomic groups within schools, the assimilation perspective posits that Mexican origin families should choose to live in geographic areas that provide more opportunities for their children have greater exposure to non-minority and non-poor students as part of the process of incorporation (Alba and Nee 2009; Charles 2003). Additionally, Mexican origin families with higher levels of socioeconomic assimilation may be able to circumvent the challenges of the local schooling context by enrolling their children in school choice options.

In sum, while demographic and schooling conditions shape opportunities for racial/ethnic and socioeconomic mixing among all students in schools within a local geographic area, these characteristics are not completely deterministic of Mexican origin school compositional characteristics. Mexican origin families may have a degree of leeway in navigating the local schooling context or could choose to move to a different local context of schooling in order to seek alternative opportunities for their children.

III. RESEARCH GOALS AND HYPOTHESES

This chapter has two main goals. First, I provide a descriptive analysis of the school racial/ethnic and socioeconomic compositional characteristics of Mexican origin youth. Second, I test the *assimilation perspective* for explaining gaps in school compositional characteristics between Mexican origin youth and their non-Latino white peers.

Hypothesis 1 (Assimilation Hypothesis): Differences in school compositional characteristics between Mexican origin and their non-Latino white peers are due to

factors related to acculturation and assimilation. Disparities in school compositional characteristics between Mexican origin and white youth will disappear once measures of socioeconomic and residential assimilation—immigrant generational status, household socioeconomic status, the geographic location of schools, and local population composition—are taken into account.

The assimilation perspective asserts that the school racial/ethnic and socioeconomic compositional characteristics of Mexican origin and white youth will become similar as Mexican origin youth are distanced temporally from the act of migration. Theoretically, controlling for immigrant generational status would offer a main test of the assimilation perspective. Immigrant generational status is a combination of nativity, parental nativity, and duration of residence (Rumbaut 2004). According to the assimilation perspective, household socioeconomic status and locational attainment outcomes should map on perfectly to immigrant generational status.

There are several problems, however, with only using immigrant generational status to test the assimilation perspective. First, the empirical evidence suggests that the Mexican origin third generation does not achieve parity with third generation non-Latino whites on socioeconomic indicators (Duncan and Trejo 2007, 2011; Groger and Trejo 2002; Telles and Ortiz 2008). For this reason, household socioeconomic status and other markers of incorporation must be taken into account to directly whether differences in socioeconomic status contribute to school compositional disparities between Mexican origin and white youth.

Second, immigrant generational status is imprecisely measured in the ELS:2002 data. A true test of the assimilation hypothesis would require an identification of third, fourth, and higher immigrant generation statuses for both Mexican origin and white youth. The ELS:2002 does not include a measure of grandparent nativity or ancestry (the parental nativity of parents of

ELS:2002 participants), making it impossible to identify the true immigrant third generation, fourth generation, and beyond in the ELS:200 data. The Mexican origin third and higher generation and the white third and higher generation are thus not directly comparable in terms of actual generational statuses. For this reason, supplemental measures of assimilation beyond generational status must be directly controlled in multivariate models. To test the assimilation hypothesis, I include measures of immigrant generational status and household socioeconomic status. To take differences in levels of spatial assimilation into account, I also include controls for the locational characteristics of schools such as urbanicity, place size, state of residence, and the demographic and socioeconomic characteristics of the population in the local area.

> *Hypothesis 2 ("Weak" Racial Stratification Hypothesis): Relative to white students, Mexican origin students will receive comparable or greater locational "returns" to increases in household socioeconomic status for their exposure to non-minority, non-co ethnic, and non-poor students in schools.*

It is difficult to test the racial stratification hypothesis directly, as most quantitative datasets do not have measures of discrimination or racialization. For this reason, many researchers assume that unobserved discrimination or racialization is at play when there are residual differences between immigrant minorities and non-Latino whites on an outcome of interest, such as schooling outcomes or neighborhood composition, after observable measures of assimilation are held constant. This approach to testing the racial stratification hypothesis is not ideal, but is common practice in the literatures on immigrant assimilation (Telles and Ortiz 2008) and neighborhood attainment (Alba and Logan 1993; Logan and Alba 1993; South and Crowder 1997; South, Crowder, and Pais 2008). Following these approaches, *I assume that the rejection*

of the assimilation hypothesis (Hypothesis #1) implies support for the racial stratification perspective.

In the event that the assimilation hypothesis (Hypothesis #1) is rejected, I will test the "weak" version of the racial stratification hypothesis. Following the conceptual framework laid out by Logan and Alba (1993), I test the "weak" version of the racial stratification hypothesis by interacting a measure of household socioeconomic status with student race/ethnicity. If the "weak" version of racial stratification is salient, then Mexican origin youth will receive comparable or higher school compositional returns to increases in household socioeconomic status, but these returns will not be great enough in magnitude for Mexican origin youth to close school compositional gaps with white peers. If the "strong" version of racial stratification is at play, then Mexican origin youth will not receive any locational returns—as measured by school compositional characteristics—to increases in household socioeconomic status.

IV. DATA AND METHODS

Data and Sample

To analyze the school compositional characteristics of Mexican origin youth and their peers, I use the restricted-use Educational Longitudinal Study of 2002 (ELS:2002), from the National Center for Education Statistics (National Center for Education Statistics, Institute of Education Sciences 2015b). The ELS:2002 includes a nationally representative sample of approximately 16,200 students in 750 schools throughout the United States.[4] The ELS:2002 sample was drawn using a two-stage sampling design. Schools were sampled first using a probability proportional to size sampling technique, and approximately 26 students within each

[4] All sample sizes have been rounded in order to comply with guidelines for using restricted-use data from the National Center for Education Statistics, Institute of Education Sciences.

school were subsequently sampled via random sampling. Although the ELS:2002 includes three waves of longitudinal data for analysis, I focus only on the base-year sample in this analysis. The base-year sample includes approximately 15,240 students who were 10th graders in 2002. The data do not include students who dropped out of school prior to 10th grade.[5]

I categorize students in the ELS:2002 sample into six mutually exclusive racial/ethnic groups based on racial status, Hispanic ethnicity status, and national origin subgroup within the Hispanic population (Mexican origin, Cuban, Puerto Rican, etc.): Non-Latino White (n=8,680), Non-Latino Black (n=2,020), Non-Latino Asian (n=1,400), Non-Latino Other Race (n=930), Mexican Origin Latino (1,500), and Latino- Other (n=760).[6] The "Non-Latino Other Race" category includes all non-Latino students that are not only White, only Black, or only Asian, including American Indians, Alaskan Natives, Pacific Islanders, and multiracial youth (non-Latino Whites, Blacks, and Asians who also identify as members of another racial group). The

[5] The results of this analysis could be biased by a lack of students who drop out of school prior to 10th grade in the ELS:2002 sample. If the school compositional characteristics of Mexican origin early dropouts are worse than those that persist in school until 10th grade, then the results of this analysis could be biased towards more favorable school compositional characteristics. To evaluate the prevalence of early dropout among Mexican origin youth, I use 2001 American Community Survey microdata (Ruggles et al. 2010) to calculate the percentage of Mexican origin Latino/a students that are not enrolled in school from ages 12 to 17 in 2001, the year preceding when the ELS:2002 was administered. Most tenth grade students in U.S. schools are approximately 15-16 years old. The percentage of Mexican origin youth that were not enrolled in school in 2001 was 1.2% for 12 year-olds, 2.1% for 13 year-olds, and 1.5% for 14 year-olds. Mexican origin school non-enrollment rates increased in 2001 at older ages, with 3.8% of 15 year-olds, 9.0% of 16 year-olds, and 18.8% of 17 year-olds, respectively, that are not enrolled in school. The results of my analysis are likely to be biased by the more selective group of Mexican origin youth that stayed enrolled in school until at least age 15 in 2001. However, the degree of bias is likely minimal, given fairly low school attrition rates among Mexican origin youth at ages younger than 15.

[6] Cell sizes have been rounded to the nearest tenth to comply with the restricted-use data regulations for the ELS:2002.

"Latino- Other" category includes all Latinos of any race who are not of Mexican origin.[7] For the sake of brevity, I do not use the "non-Latino" descriptor when referring to white, black, Asian, and Other Race students.

Measures

Dependent Variables

The main dependent variables of interest are the racial/ethnic and socioeconomic composition of schools attended by students in the ELS:2002 in 10th grade. In this analysis, I focus on the percent of non-minority students in the school, the percent of students of the same race/ethnicity in the school, and the average socioeconomic status of students in the school.

The restricted-use ELS:2002 includes a measure of the percent of minority students in the school (in 2001-2002) from the Common Core of Data (CCD). I subtract the percent of minority students in the school from 100 to obtain the percent of non-minority students in the school. In the CCD, the mutually exclusive counts of students who were members of any minority group were summed to create the count of minority students in the school. Minority groups identified include non-Latino blacks, non-Latino Asians and Pacific Islanders, non-Latino American Indians or Alaskan Natives, and Latinos of any race. Thus, the percent of non-minority students in the school is essentially a measure of the percent of non-Latino white students in the school. In fact, for non-Latino white students, the correlation between the percent of non-minority students in the school and the percent of students of the same-race/ethnicity in the school is .996.

The restricted-use ELS:2002 does not contain counts or percentages of specific racial/ethnic groups in the school. For this reason, I construct a measure of the percentage of

[7] There are significant national origin differences in educational outcomes among non-Mexican Latinos (Portes and Rumbaut 2001). Nonetheless, because the ELS:2002 contains a small number of cases representing these national origin subgroups, I categorize them jointly as "Latino- Other."

students in the school of the same race by merging data from two CCD datasets for the 2001-2002 academic year in the ELS:2002 data: The Public Elementary/Secondary School Universe Survey (National Center for Education Statistics, Institute of Education Sciences 2015d) and the Private School Universe Survey (National Center for Education Statistics, Institute of Education Sciences 2015c). These CCD datasets provide the total count of students in the school and counts for the following mutually exclusive racial/ethnic groups: Non-Latino white, non-Latino black, non-Latino Asian and Pacific Islander, non-Latino Native American and Alaskan Native, and Latino of any race. Based on this information, I calculate the percentage of non-Latino whites, non-Latino blacks, non-Latino Asians/Pacific Islanders, and Latinos of any race in the school. I subtract the sum of these percentages from 100 to obtain the percentage of students of other racial/ethnic backgrounds in the school.

Each student is assigned the value of the percentage of the specific racial/ethnic group in the school that corresponds with his/her racial/ethnic identification. For example, the percentage of students of the same-race/ethnicity in the school for a non-Latino white student is the percentage of non-Latino whites in his/her school. Because the CCD datasets do not divide Latino/as into national origin groups, all Latino students in ELS:2002 (Mexican origin and Latino- Other) are assigned the percentage of Latino students in the school as the percentage of same-race/ethnicity students in the school. Unsurprisingly, for minority students (all groups other than non-Latino whites), there is a strong negative correlation (-.71) between the percent of non-minority students in the school and the measure of the percent of students of the same-race/ethnicity in the school.

Approximately 280 out of 15,240 students in the sample of interest (1.8%) are missing values for the percent of minority students in the school, and 300 out of 15,240 students (2.0%)

are missing values for the percent of students of the same-race/ethnicity in the school. Students with missing values on these measures are assigned the mean value for the percent non-minority students or the percent of each racial/ethnic group in the school from schools with similar in-sample racial/ethnic compositional characteristics.[8]

I calculate the average socioeconomic status of students in the school using in-sample student-level data to create an aggregate school-level measure that is assigned to students through the school identification number.[9] The base-year ELS:2002 sample includes

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[8] For students in schools with missing values for the percent of non-minority or percent of racial/ethnic groups in the school, I assign school compositional characteristics based on the CCD school compositional measures of schools with similar in-sample characteristics. For the sake of clarification below, the "CCD racial/ethnic compositional" measures refer to the values of the percent of non-minority and specific racial/ethnic groups in the school that are externally linked into the ELS:2002 data and are missing for some students. In contrast, the "in-sample" or "sample-based" racial/ethnic compositional measures refer to the racial/ethnic composition of students in each school in the ELS:2002 sample that are calculated based on the students that are sampled from each school. This information is available for every school in the ELS:2002. The base-year ELS:2002 sample includes approximately 26 students sampled randomly from each school, with some students oversampled, such as Asians and Pacific Islanders. For the sample-based school racial/ethnic composition, I calculate the approximate percentage of each racial/ethnic group in the school by dividing the sum of the number of students of a particular racial/ethnic group in the school sample (multiplied by their base-year person weights) by the sum of all students in the sample for the school (multiplied by their base-year person weights) and multiplying by 100. I then calculate the school's percentile rank for each sample-based racial/ethnic compositional measure. I then calculate the mean CCD measure of interest (% non-Latino white, % non-Latino black, etc.) for each sample-based school composition percentile rank. I then assign the mean CCD school composition value to schools with missing CCD values, based on the school's percentile rank for the sample-based racial/ethnic characteristic of interest. For instance, for a school that is in the 92nd percentile for percent white based on in-sample characteristics, I assign the mean CCD percent white value that is obtained by taking the mean CCD percent white value for all other schools in the 92nd percentile for the in-sample percent white measure.

[9] Creating an aggregate school-level measure of average socioeconomic status using student-level measures in the ELS:2002 is less than ideal, given the fairly small number of students that are sampled randomly within schools. However, I have chosen this measure over alternatives for several reasons. First, although the ELS:2002 dataset includes a measure of the percent of students receiving Free and Reduced Price Lunch from the Common Core of Data, this variable has a high number of missing values (30%). There is not a measure of eligibility for free and reduced price lunch at the student level that would allow me to impute missing values. Free and

approximately 26 students sampled randomly from each school. However, some students were oversampled, such as Asians and Pacific Islanders. The ELS:2002 does not include a within-school sample weight, so there is no way to determine exactly how many students each case in the ELS:2002 represents within his/her school. However, I use the base-year student weights in the ELS:2002 as a proxy for within-school weights. For each student *i* in school *j*, the average SES of the school is calculated as follows:

$$[(\Sigma\ (=\text{Base-year SES for Student}_{ij})*(\text{Base-Year Weight for Student}_{ij}))/$$

$$\Sigma\ (\text{Base-Year Weight for Student}_{ij})\ ] * 100$$

Independent Variables

I include dummy variables for the five racial/ethnic groups of interest in the ELS:2002 (Mexican origin, Other Latinos, black, Asian, and Other Race) with whites as the reference category. The coefficients for these variables represent the gap in school compositional characteristics between each racial/ethnic group and whites. To test the assimilation hypothesis, I include several control variables that measure acculturation and incorporation, including immigrant generational status, socioeconomic status, and measures of locational attainment.

To measure immigrant generational status, I combine information on nativity and duration of residence to create immigrant generational groups, based on Rumbaut's (2004) typology for fractional generations. The ELS:2002 dataset includes information on student,

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reduced price lunch (FRPL) may also be a poor overall measure of socioeconomic status, because this measure contains both "false positives"—students who are not eligible for FRPL but are listed as eligible—and "false negatives"—students who are eligible for FRPL but do not apply (see Harwell and LeBeau 2010). Variables such as parental education and occupation, household composition, and income are preferable measures of socioeconomic status when compared to federal cut-off points for poverty status (Hauser 1994). For this reason, I use an aggregate school-level measure of socioeconomic status based on in-sample student characteristics. The base-year socioeconomic status index is available for all students in the ELS:2002 sample, and takes into account parental education, occupation, and income.

maternal, and paternal nativity and student age of arrival from the parent questionnaire administered during the base-year survey in 2002. I use this information to classify students into five immigrant generational groups: Third and higher generation, 2nd/2.5 generation, 1.75 generation, and 1st/Foreign-born (FB) "Other" generation. The 3rd and higher generation includes U.S.-born students who have parents that are U.S.-born. The 2nd-/2.5-generation includes U.S.-born students that have one or two parents who are foreign born. Foreign-born students are divided into two groups, based on parental reports of age of arrival. The 1.75 generation includes foreign-born students who arrived in the United States before the age of five. This group is distinct from other foreign-born youth, because these students have likely attended school only in the United States. Finally, the 1st/FB Other category includes foreign-born students who arrived after the age of five, as well as foreign-born youth who are missing information on age of arrival. These foreign-born youth have fewer years of exposure to the U.S. education system than the 1.75 generation, and likely experienced discontinuity in their educational experiences due to the act of immigration.

As previously stated, controlling for immigrant generational status alone is not a full test of the assimilation hypothesis, because immigrant generational statuses beyond the second generation are imprecisely measured in the ELS:2002, and also because of potentially lingering disparities in socioeconomic and locational attainment patterns between third and higher generation Mexican origin and third and higher generation whites. For this reason, I directly control for measures of assimilation related to social origins and spatial assimilation. To measure household socioeconomic resources, I use the student-level household socioeconomic status (SES) composite variable in the base-year ELS:2002. The SES variable is an index that combines measures of parental educational attainment, family income, and parental occupational

prestige (SEI score). The SES composite variable is normally distributed, and ranges from approximately -2.0 to 2.0.[10]

While not directly related to the assimilation hypothesis, family composition may also influence the types of schools that children attend. Parents in intact families may be better able to pool resources—both financial and social—to enroll their children in schools with lower proportions of minority and socioeconomically disadvantaged students. I divide students into four family composition categories: Intact (both biological or adoptive parents in the household), stepparent (one biological/adoptive parent and one stepparent), mother only, and "other" (father only, grandparent/s, sibling/s, or other family composition).

To address the extent to which school compositional differences between Mexican origin and non-Latino white youth can be attributed to differences in residential assimilation or the school choices of families, I control for school location and school sector characteristics. I control for the size of the local area (based on population counts) and the urbanicity of a student's school as a potential factor explaining school compositional differences between Mexican origin and non-Latino white youth. I characterize school location by placing schools into 7 categories that combine urbanicity and place size: Central City/Large City, Central City/Mid-size City, Urban Fringe/Large City, Urban Fringe/Mid-size City, Large Town, Small

[10] To examine whether the SES composite variable provided a better model fit than controlling for individual components of the SES index, I compared BIC values across multivariate models predicting school compositional characteristics. Including the SES index as a predictor yields comparable BIC values to models that include the component variables of the SES index: Parental education, family income, and parental occupational SEI. For reasons of parsimony, I use the SES composite variable in the models presented here. Models including the parental education, family income, and parental occupational SE variables instead of the SES composite are available upon request.

Town, and Rural.[11] I also include state fixed effects (dummy variables), in order to control for unmeasured state characteristics that may influence school compositional characteristics, such as the demographic composition of the state population. I further control for whether the school that a student attends is public, Catholic, or another type of private school.

Finally, remaining residual differences in school compositional characteristics may be due to spatial assimilation among Mexican origin families across the country. The socio-demographic characteristics of the local population will shape opportunities for students to access schools with particular racial/ethnic and socioeconomic compositional characteristics. For instance, assuming that there is no racial/ethnic segregation within a county, a student living in a county with a high proportion of non-minorities will have an increased likelihood of enrolling in a school with a high proportion of non-minorities relative to a student living in a county where there are few non-minorities.

To take into account the overall opportunity structure for school racial/ethnic and socioeconomic integration, I control for the racial/ethnic and socioeconomic characteristics of the counties where schools are located.[12] I obtain data on the racial/ethnic composition of the high school age population (ages 14-18) within each county from a Census 2000 5% IPUMS microdata sample (Ruggles et al. 2015) and county-level data on per capita personal income in the year 2000 from the Bureau of Economic Analysis (Bureau of Economic Analysis, US Department of Commerce 2015). In models predicting the percent of non-minority students in the school, I control for the percent of individuals in the county who are non-Latino white. In

[11] Central city and urban fringe designations, as well as city size, are provided by the ELS:2002, and are based on Census Bureau definitions: http://nces.ed.gov/ccd/rural_locales.asp

[12] I have chosen to use counties to capture the local opportunity structure for racial/ethnic and socioeconomic integration in schools because the county identifier is available for all students in the restricted-use ELS:2002. Using an identifier such as the metropolitan area would force me to exclude students in non-metropolitan areas.

models predicting the percent of same-race/ethnicity students in the school, I control for the percent of individuals in the county who are of the same racial or ethnic background as the student. Finally, in models predicting the socioeconomic composition of the school, I control for a logged measure of per capita income in for the county in 2000.

The county socio-demographic composition may be too broad, however, to represent the true opportunity structure for contact between racial/ethnic and socioeconomic groups within school districts. For this reason, I estimated supplemental models that incorporated school district demographic and socioeconomic characteristics for the year 2000 from the School District Demographics System (SDDS), a collaboration between the U.S. Census Bureau and the National Center for Education Statistics (National Center for Education Statistics, Institute of Education Sciences 2015a). The substantive results using the SDDS socio-demographic control variables for public students only were similar to those found using the full sample and incorporating county-level socio-demographic controls. For this reason, I do not display the results of these models in the current analysis, but they are available upon request.

Methods

I begin by summarizing the characteristics of Mexican origin youth and their racial/ethnic peers in the base-year ELS:2002 sample .[13] I then examine the average school racial/ethnic and socioeconomic compositional characteristics of 10th graders in the ELS:2002 by student race/ethnicity, immigrant generational status, and immigrant generational groups within racial/ethnic groups. Finally, I use Ordinary Least Squares (OLS) regression models with robust standard errors to examine the relationships between student background characteristics and school racial/ethnic and socioeconomic composition. I use the coefficients from the full OLS

[13] All descriptive statistics are weighted using the ELS:2002 base-year student weights.

models to calculate the predicted school compositional characteristics of Mexican origin youth by immigrant generational status and household socioeconomic status. The predicted school compositional values illustrate the residual school compositional gaps would be observed between Mexican origin and white generational and socioeconomic status groups if all other variables in this analysis were held at their means.

For the multivariate analysis, I only include students who participated in the base-year (10^{th} grade) ELS:2002 survey (n=15,240). Cases that have missing values on the independent variables are included in the analysis, but are flagged using dummy variables. See Table 2.1 for the percentage of students that are missing values for the independent variables of interest.

V. RESULTS

Background Characteristics of Mexican Origin Youth in the ELS:2002 Base-Year Sample

Table 2.1 displays the mean background characteristics of students in the ELS:2002 base-year sample by student race/ethnicity. Mexican origin Latinos make up approximately 11.0% of all 10^{th} graders—the largest immigrant minority subgroup in the ELS:2002 base-year population. Over half of Mexican origin youth live in immigrant households—they are foreign-born youth themselves (first generation), or are U.S.-born youth with at least one foreign-born parent (second and 2.5 generation). Nearly one-third of Mexican origin youth are members of the third and higher generation—they are U.S.-born youth with U.S.-born parents who continue to identify as Latinos of Mexican origin. The immigrant generational composition of the Mexican origin 10^{th} grade population suggests that isolation in high-minority, high-poverty schools may be partly driven by the fact that the majority of this group has immigrant parents, who are likely drawn into immigrant enclaves.

Mexican origin youth have the most disadvantaged social origins of any racial/ethnic group in the ELS:2002. Mexican origin youth have the lowest mean household socioeconomic index score (-.551), even relative to blacks (-.248). Disadvantaged social origins are likely to contribute to Mexican origin students' disproportionate enrollment in high-minority, high-poverty schools. The family composition of Mexican origin youth is similar to the family composition of the overall 10th grade population. The majority of Mexican origin youth live in households where two biological or adoptive parents are present.

The geographic characteristics of the schools attended by Mexican origin youth reflect general patterns of residential settlement among immigrant origin populations in the United States. Immigrant families tend to be drawn into central cities in metropolitan areas through employment opportunities and immigrant networks (Portes and Rumbaut 2006). For this reason, it is unsurprising that nearly half (47.2%) of Mexican origin 10th graders attend schools located in central city areas of mid- to large-size cities. Approximately 40-50% of Other Latino, black, and Asian students also attend schools in central cities areas. In comparison, only 19.6% of white students attend schools in central cities within large or mid-size cities. The vast majority of all 10th grade students (92.4%) attend public schools, but public school attendance is highest among Mexican origin (96.7%) and black (97.3%) youth.

The socio-demographic characteristics of the counties where Mexican origin youth attend school also suggest that Mexican origin youth may have fewer opportunities than their peers to attend schools with higher concentrations of non-Latino white and middle- or high-income students. On average, Mexican origin youth attend schools in counties where 50.3% of fellow high-school age students are white—the lowest county-level percentage of whites of any racial/ethnic group in the ELS:2002 base-year sample. Additionally, Mexican origin youth in the

ELS:2002 live in counties with the lowest levels of per capita income. Even if there were no racial/ethnic or socioeconomic segregation across schools within counties, Mexican origin youth would have a greater risk of attending a high-minority, high-poverty school relative to their peers, given the socio-demographic composition of their counties.

The Racial/Ethnic and Socioeconomic Composition of Peers in Schools Attended by Mexican Origin Youth

I now turn to the dependent variables of interest—school racial/ethnic and socioeconomic composition. Figures 2.1, 2.2, and 2.3 display the distribution of Mexican origin, white, and black 10th graders across schools by the percent of non-minority students in the school, the percent of same-race/ethnicity students in the school, and average school socioeconomic status, using kernel density plots.[14] Table 2.2 also displays the mean school compositional characteristics of racial/ethnic groups in ELS:2002.[15] Mexican origin and black students are highly concentrated in schools with low percentages of non-minority students, whereas white students attend schools with extremely high proportions of non-minority students. According to the results in Table 2.2, Mexican origin and black students on average attend schools where fewer than 38% of students in the school are non-minority (i.e. where 62% of students are

[14] I use the Epanechnikov kernel, with Silverman's plug-in bandwidth estimate (h*) equal to $2.345 * N^{-0.2} *$ min(sd, iqr/1.349) where N is the sample size, sd is the sample standard deviation, and iqr is the interquartile range (Cameron and Trivedi 2005). The distributions displayed are all significantly different from one another at $p<.001$, based on comparisons using the two-sample Kolmogorov-Smirnov test for equality of distribution function.

[15] The values in Table 1.2 are population averages that are obtained using sampling weights from ELS:2002 survey data (see Methods section). These values are not measures of exposure based on population counts, which are commonly used in research on neighborhood and school segregation. It is not possible to create an exposure index using survey sample data such as the ELS:2002. Creating an index of exposure between Mexican origin and NL white youth would require counts of the total student population enrolled in high schools in 2002, the total number of Mexican origin students in each school, the total number of non-Latino white students in each school, and the total number of students in each school. The ELS:2002 only samples a subset of all high schools and students within schools, and does not include these population totals.

minorities). In comparison, the vast majority of white 10th graders attend schools where over 80% of the students are non-minorities.

For Mexican origin students, a lack of exposure to non-minority students is commensurate with isolation with fellow co-ethnic Latino/a students in schools. On average, Mexican origin youth attend schools where almost half of fellow students (48.6%) are co-ethnic Latinos (see Table 2.2). Black students are similarly isolated with co-racial students, attending schools where 47.3% of fellow students are black. While co-racial/ethnic homophily may be a feature of schooling for all students, white students are extremely more likely to attend schools with students of the same-race/ethnicity than other groups in the ELS:2002. White students attend schools where over 80% of fellow students are also white.

Figure 2.3 demonstrates that Mexican origin and NL black students are also concentrated in schools with lower SES levels than the schools attended by white students. Recall that the student-level SES index is a standardized measure with a mean of zero and a standard deviation of 1.0. A school with a negative mean SES value has higher proportions of lower-SES students, and a school with a positive mean SES value has higher proportions of middle- and high-SES students. Mexican origin students have the lowest mean school SES values of any racial/ethnic group in ELS:2002 (Table 2.2). While not all white students attend high-SES schools, the bulk of the white student population attends schools with near-average peer SES levels.

The Racial/Ethnic and Socioeconomic Composition of Peers in Schools Attended by Mexican Origin Youth: Variation by Immigrant Generational Status

Before turning to multivariate models, I assess whether there is descriptive evidence of Mexican origin assimilation into schools with higher proportions of non-minority and higher SES students, and lower proportions of co-ethnic Latino/a students. Table 2.2 displays school compositional characteristics for racial/ethnic groups by immigrant generational status.

Fractional immigrant generational groups are intended to capture the degree of exposure that Mexican origin youth and their families have had to U.S. society and institutions (Rumbaut 2004). According to the classic assimilation perspective (Alba and Nee 2009; Warner and Srole 1945), racial/ethnic and socioeconomic isolation in schools should be highest among the Mexican origin 1st generation, but isolation should decrease among the 2nd and 3rd and higher generations.

In the ELS:2002 data, the Mexican origin population does not show a clear pattern of improvement in school compositional characteristics by immigrant generational status. There is little difference in the school racial/ethnic and socioeconomic compositional characteristics of the Mexican origin 1st, 1.75, and 2nd/2.5 generational subgroups, particularly when standard errors are taken into account. However, 3rd and higher generation Mexican origin youth attend schools with higher percentages of non-minority students, lower percentages of same-race/ethnicity students, and higher mean school SES values relative to their 1st and 2nd generation counterparts.[16] This pattern suggests that parental nativity, rather than student nativity, is a key determinant of the types of schools that Mexican origin youth attend. This outcome is logical, given that Mexican origin parents rather than Mexican origin students are likely making decisions about residential and school choice.

Notably, the compositional characteristics of schools attended by 3rd and higher generation Mexican origin youth show little resemblance to the schools attended by 3rd and higher generation white youth. Third and higher generation Mexican origin youth attend schools

[16] Other immigrant origin groups also exhibit a pattern of generational assimilation in school compositional characteristics from the 1st to the 3rd and higher generations. However, because generational subgroups within these racial/ethnic groups are small, the estimates have a higher degree of uncertainty, making it difficult to discern differences between the <1.75, 1.75, and 2nd/2.5 generations.

with approximately 34.7 percentage points more minority students and a -.3 standard deviation deficit in average school SES relative to 3rd and higher gneration whites. The Mexican origin 3rd and higher generation has somewhat greater exposure to non-minority students than 3rd and higher generation blacks (an 8.8 percentage point difference). However, both of these groups attend schools that have low average peer SES levels (around -.17 standard deviation units from the mean).

Gaps in The Percent of Non-Minority Students in the School Between Mexican Origin and White Students: Multivariate Results

The results thus far reveal wide gaps in school racial/ethnic and socioeconomic composition between Mexican origin and white students, even among 3rd and higher generation subgroups. I now use multivariate OLS regression models to examine the extent to which these gaps can be explained by differences in levels of socioeconomic and spatial assimilation. I focus on comparing Mexican origin youth to their white peers because 3rd and higher generation whites are typically used as a benchmark for assimilation in analyses of immigrant socioeconomic integration patterns (see, for example, Alba and Nee 2009).

I begin by examining gaps in the percent of non-minority students in the school between Mexican origin and white youth. Table 2.3 presents results for an OLS regression with the percentage of non-minority students in the school as the dependent variable. The sample is restricted to only youth in the ELS:2002 who participated in the base-year survey (n=15,240). The coefficients for Mexican origin Latino/as represent gaps in the percentage of non-minority in the school between Mexican origin and white youth.

Differences in the percentage of non-minority students in the school between Mexican origin and white youth cannot be fully attributed to disparities in nativity and length of residence. Model 1 in Table 2.3 shows that holding immigrant generational status constant only reduces the

baseline gap in the percent of white students in the school between these two groups by 3.2 percentage points (Model 1 versus Model 0). Unsurprisingly, youth with greater socioeconomic resources attend schools with fewer minority students, holding constant differences in race/ethnicity and immigrant generational status (Model 2). Although Mexican origin youth are extremely disadvantaged socioeconomically relative to whites, taking differences in household socioeconomic status into account in Model 2 only further reduces the gap in the percent of non-minority students in the school between Mexican origin and youth by an additional 2.0 percentage points (Model 2 relative to Model 1). Taking two key measures of assimilation—immigrant generational status and household socioeconomic status—into account reduces gaps in the percent of non-minority students in the school between Mexican origin and white youth by a modest 5.3 percentage points.

I next specifically assess how differences in spatial assimilation and school sector impact disparities in exposure to non-minority students between Mexican origin and white youth. Model 3 in Table 2.3 adds attributes of school location (urbanicity and place size, county socio-demographic composition, state fixed effects) and school sector. Controlling for these factors reduces disparities in the proportion of non-minority students in the school between Mexican origin and white students by nearly 25 percentage points in Model 3 relative to Model 2. These results suggest that the sorting of Mexican origin and white families across geographic areas (cities, metros, counties, and states) is a major driver of differences in exposure to non-minority students between Mexican origin and white youth.

When all measures of assimilation are held constant, the "net" gap in the percentage of non-minority students in the school between Mexican origin and white students is -14.5 percentage points. I next interact immigrant generational status with racial/ethnic status to

determine whether the magnitude of this "net" gap varies between fractional immigrant generational groups within the Mexican origin population and 3rd and higher generation whites. In model 4, the coefficient for Mexican origin youth now represents the gap in the percent of non-minority students in the school between 3rd and higher generation Mexican origin and 3rd and higher generation white students. The coefficients for the generational status by race/ethnicity interaction terms indicate the extent to which this disparity differs for other Mexican origin generational subgroups. Based on results from Model 4, the net disparity with whites in the percentage of non-minority students in the school is 9.9 percentage points for the Mexican origin 3rd and higher generation, 17.6 percentage points (-9.9 + -7.7) for the 2nd/2.5 generation, 20.7 percentage points (-9.9 + -10.8) for the 1.75 generation, and 17.9 percentage points (-9.9 + -8.0) for the 1st/FB Other generation.

Thus far, measures of assimilation attenuate, but do not fully explain differences in school non-minority composition between Mexican origin youth and their white peers, suggesting that racial stratification may be at play. To test the "weak" version of the racial stratification hypotheses, I incorporate an interaction between race/ethnicity and household SES in Model 5. The results in Model 5 support the "weak" version of the racial stratification model for explaining Mexican origin young adult exposure to non-Latino students in schools. Consonant with the "weak" racial stratification hypothesis, the relationship between household SES and the percentage of non-minority students in the school is stronger for Mexican origin youth than for white youth. A one standard deviation unit increase on the SES index is associated with a .4 percentage point increase in the percent of non-minority students in the school for whites, but a 6.5 percentage point increase (.4 + 6.1) in the percent of non-minority students in the school for Mexican origin youth. Thus, increases in socioeconomic status help

Mexican origin youth to attend schools with greater proportions of minority students, but the rate of return on advancement in household SES is not enough for these students to close gaps in the percent of non-minority students in the school with whites.

Gaps in the Percent of Students of the Same-Race/Ethnicity Between Mexican Origin and White Students: Multivariate Results

I now look at another dimension of school racial/ethnic composition—the percentage of students of the same-race/ethnicity in the school. I follow the same analytical strategy as in the previous section, but with the percent of students of the same-race/ethnicity as the dependent variable. The coefficients for Mexican origin students in Table 2.4 do not represent a gap in Mexican origin versus white student exposure to a common group, but rather to members of *their own racial/ethnic group*. Conceptually, these coefficients *quantify the difference in the percentage of Latino/a students in the school for Mexican origin students and the percentage of white students in the school for whites*. Parity in these models thus takes on a different meaning than parity in exposure to a common group, such as non-minority students. If assimilation is achieved, then we would not expect parity in the percentage of same-race/ethnicity students in the school, but rather that exposure to co-ethnics would be proportional to the difference in the percentage of Latino/a and white students found in the student population. This expected value is approximately -44.3 percentage points (15.9% of students in the ELS:2002 are Latino/a and 60.2% are white) for students in the base-year ELS:2002.

In the baseline model in Table 2.4, Mexican origin youth have 35.8 percentage points fewer same-race/ethnicity students in the school than white students. Recall from Table 2.2 that white students have the highest exposure same-race/ethnicity students in the school of any racial/ethnic group.

The magnitude of this gap actually increases slightly from Model 0 to Model 2 (by 1.8 percentage points). When measures of assimilation such as immigrant generational status and household socioeconomic status are taken into account, white student exposure to whites is 37.5 percentage points higher than Mexican origin student exposure to Latino/a students. However, the gap in the percent of same-race/ethnicity students between Mexican origin and white youth reverses in sign once differences in locational characteristics and school sector are taken into account (Model 3). When all measures of assimilation are held constant, Mexican origin youth have a slightly higher percentage (5.3 percentage points) of co-ethnics in their school relative to white students.

Model 4 adds interactions between immigrant generational status and race/ethnicity. The coefficient for Mexican origin youth now represents gaps in the percent of same-race/ethnicity youth between the Mexican origin 3rd and higher generation and 3rd and higher generation whites. Notably, there is a not a significant difference in the percent of same-race/ethnicity students in the school between 3rd and higher generation Mexican origin and 3rd and higher generation white youth. However, the Mexican origin 2nd/2.5 generation has 6.1 percentage points (.3 + 5.8), and the Mexican origin 1st/FB Other generation 12.9 percentage points (.3 + 12.6), more same-race/ethnicity students in the school relative to 3rd and higher generation whites, respectively.

Model 5 in Table 2.4 adds an interaction between household socioeconomic status and student race/ethnicity. Socioeconomic resources facilitate Mexican origin access to schools with fewer co-ethnic students. For Mexican origin youth, a 1.0 standard deviation increase in household socioeconomic status decreases the percent of co-ethnic students in the school by 8.1

percentage points (1.3 + -9.4). Socioeconomic assimilation could thus be a key means for Mexican origin students to attend schools with lower concentrations of co-ethnics.

Interestingly, the results of this model show that the relationship between socioeconomic status and exposure to students of the same-race/ethnicity is positive for white youth, but negative for all other racial/ethnic groups in ELS:2002. All factors in the model being equal, whites gain greater exposure to fellow whites as their socioeconomic resources increase, but minority students gain decreased exposure to co-racial/co-ethnic students as their household socioeconomic resources increase.

These results show that Mexican origin youth could close gaps in the percentage of same-race/ethnicity students white students by the 3rd and higher generation if background and school locational characteristics were held constant. However, parity in this instance refers to the Mexican origin 3rd and higher generations having equal exposure to Latinos as white 3rd and higher generation students have to fellow white students. If all students were distributed equally across schools, then Latino/a exposure to co-ethnics should be lower than white student exposure to fellow white students, because Latino/a students make up a smaller share of the overall student population. Thus, my results hint at small lingering effects of segregation on exposure to co-ethnic students, even after differences in levels of assimilation are held constant.

Gaps in School Socioeconomic Composition Between Mexican Origin and Non-Latino White Students: Multivariate Results

I conclude by analyzing whether Mexican origin youth show evidence of assimilation to the school socioeconomic compositional characteristics of white students. Table 2.5 displays results for an OLS regression model with mean socioeconomic status of students in the school as the dependent variable. Recall that the student-level SES composite measure is a standardized index with a mean of zero and a standard deviation of 1.0. Coefficients for Mexican origin youth

can be understood as standard deviation unit differences in mean school socioeconomic status with white students.

The results in Table 2.5 show that the baseline gap in mean school SES between Mexican origin and NL white students is -.409 standard deviation units. Adjusting for differences in immigrant generational status (Model 1) does not appreciably change the magnitude of the school SES gap between Mexican origin and white students. This finding implies that, even if differences in nativity and duration of residence in the U.S. were equalized, the school SES gap between Mexican origin and white youth would remain virtually the same.

Not unexpectedly, students from households with greater socioeconomic resources attend schools with higher aggregate socioeconomic levels (Model 2). Differences in socioeconomic status explain a significant portion of the gap in school socioeconomic status between Mexican origin and white youth. Controlling for household SES reduces gaps in socioeconomic composition between Mexican origin and white students by -.204 standard deviation units relative to only controlling for differences in generational status, a 50% reduction in the gap in Model 2 versus Model 1.

Taking differences in spatial assimilation and school sector into account further attenuates disparities in mean school SES values between Mexican origin and white youth by .087 standard deviation units, a further 41.7% reduction in Model 3 relative to Model 2. However, Mexican origin youth still have the greatest disparity in school mean SES levels with whites than any other group in the full assimilation model (Model 3). Measures of assimilation attenuate the gap in school SES between Mexican origin and white youth by 70.3% (Model 3 relative to Model 0), but a significant gap remains even when these factors are taken into account.

I next examine the interaction between student race/ethnicity and immigrant generational status as a predictor of mean school SES levels, controlling for differences in levels of assimilation. The "net" disparity in school mean SES levels with 3rd and higher generation whites is -.069 standard deviation units for the Mexican origin 3rd and higher generation, -.162 for the Mexican origin 2nd/2.5 generation (-.069 + -.094), -.109 for the Mexican origin 1.75 generation (-.069 + -.040), and -.195 for the Mexican origin 1st/FB Other generation (-.069 + -.126= -.195). In sum, although the Mexican origin 3rd and higher generation has a narrower gap with 3rd and higher generation whites in average school SES levels relative to the Mexican origin 2nd/2.5, 1.75, and 1st/FB other generations, this group does not achieve parity in school SES levels with 3rd and higher generation whites even after taking differences in levels of socioeconomic and spatial assimilation into account.

Finally, I determine whether Mexican origin youth with greater household socioeconomic resources are able to enroll in schools with higher SES levels. The results in Model 5 show that Mexican origin youth receive greater returns to increases in household socioeconomic status for exposure to higher SES students than white students. For whites, a 1.0 standard deviation increase in household SES increases the average SES level of the schools attended by whites by .187 standard deviation units. For Mexican origin youth, a similar increase in household SES increases the average SES level of the school by .231 standard deviation units, a modest but slightly higher rate of return. These results confirm that socioeconomic assimilation helps Mexican origin students to enroll in schools with lower concentrated poverty levels.

Predicted School Compositional Characteristics by Immigrant Generational Status and Student Household Socioeconomic Status

I use the coefficients from the full models (Model 5) in Tables 2.3, 2.4, and 2.5 to calculate the predicted school compositional characteristics of Mexican origin immigrant

generational groups and socioeconomic groups. These predicted values represent the school compositional characteristics that would be observed for Mexican origin, white, and black youth if background factors that influence school compositional characteristics, such as the demographic characteristics of the county, were held at their means. I display these results visually in Figures 2.4 and 2.5, and the estimates used to generate these graphics are displayed in Tables 2.6 and 2.7.

The results in Figure 2.4 show that 3rd and higher generation Mexican origin youth have more favorable predicted school compositional characteristics than the Mexican origin 1st and 2nd/2.5 generations—with higher predicted levels of non-minority students, lower predicted levels of Latino/a students, and slightly higher mean school SES levels. Still, even if other background characteristics were held at their means, 3rd and higher generation Mexican origin youth would attend schools with 9.7 percentage points fewer non-minority students, and a mean school SES level that is .06 standard deviation units lower, than the schools attended by whites.

Figure 2.5 also confirms that socioeconomic resources are a key means for Mexican origin youth to enroll in schools with lower concentrations of minority, Latino/a, and poor students. Predicted exposure to non-minority, non-Latino/a, and higher SES youth increases monotonically with socioeconomic status among Mexican origin 10th graders. However, even high SES Mexican origin youth would attend schools with lower percentages of non-minority students than low SES white students. In fact, white exposure to non-minorities appears to be unrelated to household socioeconomic status. With all other characteristics held at their means, whites of all socioeconomic backgrounds would attend schools where over 70% of students are non-minorities.

While higher SES Mexican origin youth attend school with higher average student SES levels, they attend schools with lower SES levels than whites at every level of socioeconomic status. The average predicted SES level of the schools attended by middle and high SES Mexican origin youth are lower than the predicted values for middle and high SES white students.

VI. SUMMARY AND CONCLUSION

This research provides a descriptive analysis of the racial/ethnic and socioeconomic characteristics of peers in schools attended by Mexican origin 10th graders in ELS:2002, and evaluates the determinants of gaps school in school compositional characteristics between Mexican origin and white students. I find that Mexican origin 10th graders attend more racially/ethnically and socioeconomically isolated schools than all of their peers in the ELS:2002. In fact, gaps in the percentage of non-minority students and the average socioeconomic status of the school between Mexican origin and white youth are wider than for any other racial/ethnic group in the ELS:2002. The high levels of racial/ethnic and socioeconomic isolation among Mexican origin youth that I have chronicled in this analysis are largely consistent with prior research on Latino racial/ethnic and socioeconomic segregation (Orfield et al. 2012).

A key question that I have sought to answer in this analysis is whether Mexican origin youth show evidence of assimilation to the school compositional characteristics of white students. The Mexican origin population is heterogeneous, and includes both foreign-born newcomers and U.S.-born children of U.S.-born parents that self-identify as Mexican origin Latino/as (Alba et al. 2013). I have sought to determine whether differences in assimilation—

especially socioeconomic and spatial assimilation—account for disparities in school compositional characteristics between Mexican origin and white youth.

Gaps in school composition between Mexican origin and white adolescents are partially due to factors related to acculturation and assimilation. Accounting for differences in nativity, duration of residence, socioeconomic resources, and the spatial location of schools reduces differences in exposure to non-minority students and peer SES levels between Mexican origin and white youth by approximately 70%. Thus, with assimilation and incorporation, Mexican origin youth are able to attend schools that more closely resemble those of their white peers.

Importantly, I find that school racial/ethnic and socioeconomic characteristics of schools vary within the Mexican origin adolescent population according to immigrant generational status and household socioeconomic status. The school compositional characteristics of 1st and 2nd/2.5 generation Mexican origin youth are very similar, but the Mexican origin 3rd and higher generation attends schools with higher levels of non-minorities, lower levels of Latino/a students, and higher SES levels than their 1st and 2nd/2.5 generation counterparts. This finding suggests that having a U.S.-born parent matters more for the school compositional characteristics of Mexican origin youth than whether the student is foreign- or U.S.-born parent. This finding is logical, given that Mexican origin parents are likely making key decisions about place of residence and school choice.

Mexican origin students with greater household socioeconomic resources also attend schools with lower proportions of minority, Latino, and socioeconomically disadvantaged peers. In fact, relative to white students, Mexican origin students receive higher returns to increases in socioeconomic status for their exposure to non-minority, non-Latino/a, and non-poor students.

Nonetheless, the factors that I have examined in this analysis cannot fully account for the observed disparity in school racial/ethnic and socioeconomic compositional characteristics between Mexican origin and white students. Even after taking differences in socioeconomic resources and spatial location into account, 3rd and higher generation Mexican origin youth attend schools with lower percentages of non-minority students and lower average school SES levels than 3rd and higher generation white students. Additionally, even after holding constant observable background characteristics, Mexican origin youth at each socioeconomic level (high, middle, low SES) attend schools with higher concentrations of minority students and lower mean school SES levels than whites. Overall, my findings support the "weak" version of the racial stratification model, a variant of the place stratification model that is utilized in neighborhood locational attainment models (Logan and Alba 1993). Mexican origin youth do exhibit assimilation in schools by racial/ethnic and socioeconomic composition, but not to a degree that is sufficient to achieve parity in school characteristics with their white peers.

Several factors may explain residual gaps in school compositional characteristics between 3rd and higher generation Mexican origin and 3rd and higher generation white youth. First, these results may be due to selective ethnic identification among 3rd and higher generation Mexican origin Latinos. The measure of 3rd and higher generational status in this analysis is not based on reports of the nativity of grandparents, but rather on student nativity, parent nativity, and racial/ethnic identification. Third and higher generation Mexican origin youth whose parents have higher levels of educational attainment and income, and/or whose parents are intermarried, may not identify as Mexican origin Latinos (Duncan and Trejo 2007). If Mexican descent students who do not identify as Mexican origin Latino/a are enrolled in more integrated school

settings, then Mexican origin youth may experience greater assimilation in schools than is revealed in this analysis.

Second, between- and within-district school segregation patterns could explain these residual gaps. While my analysis controls for local population composition at the county level, it does not control for the school segregation of Mexican origin youth within counties. Racial/ethnic and socioeconomic school segregation could be driving the remainder of the gap that I observe between Mexican origin and white youth on measures of the percent of non-minority students and mean SES levels of schools.

Finally, as other scholars have argued (Bean and Stevens 2003), the Mexican origin population may be experiencing assimilation at a slower pace than other immigrant origin groups. Foreign-born Mexican origin youth and their families occupy one of the most disadvantaged socioeconomic positions in U.S. society, especially given the barriers associated undocumented status for many in this population. Given this situation, the Mexican origin population may need an even longer generational time horizon to achieve greater levels of integration into schools.

Given these results, how should researchers and policymakers address the issue of racial/ethnic and socioeconomic isolation among Mexican origin youth in schools? My work points to three potential areas for intervention. First, foreign-born Mexican immigrant parents may need more information about school choice within the U.S. education system. The adolescent children of Mexican immigrants—both those who are foreign-born and U.S.-born—attend schools higher concentrations of minority and socioeconomically disadvantaged students than U.S.-born Mexican origin youth with U.S.-born parents. Foreign-born Mexican immigrant parents may need more information about residential and school choice options to enroll their

children to attend more integrated schools. However, if immigrant enclaves provide mechanisms of support for Mexican immigrant parents, then it may be difficult for the children in foreign-born Mexican origin households to attend schools outside of those located in enclave areas.

Second, policies that boost household socioeconomic resources could help Mexican origin youth to access more integrated schools. Mexican origin youth with higher socioeconomic statuses attend schools with lower concentrations of minority, Latino/a, and socioeconomically disadvantaged students. Increasing socioeconomic resources within Mexican origin households would likely promote access to more integrated schools via residential and school choice options.

Finally, policies that promote spatial assimilation among Mexican origin families would help Mexican origin youth to gain access to states, counties, and neighborhoods where there are greater opportunities to come into contact with non-minority and non-poor youth. A significant portion of school compositional gaps between Mexican origin and white youth can be attributed to the fact that these two populations are living in different states, metropolitan areas, and counties. In a context where neighborhood choice is a key means of achieving school choice, policies that promote great spatial mixing of Mexican origin and white families across states, metros, counties, and neighborhoods—such as housing policies and economic policies—will create more opportunities for Mexican origin and white youth to attend schools together.

Mexican origin youth face clear challenges to enrolling in schools with lower concentrations of minority, Latino/a students, and poor students. A key question is whether racially/ethnically and socioeconomically isolated schooling contexts have negative influences on their educational outcomes. In the next chapter, I use the ELS:2002 to examine the relationship between school compositional characteristics and dropout among Mexican origin

youth. In the subsequent chapter, I evaluate the role that school composition plays in explaining variation in school engagement levels of among Mexican origin students.

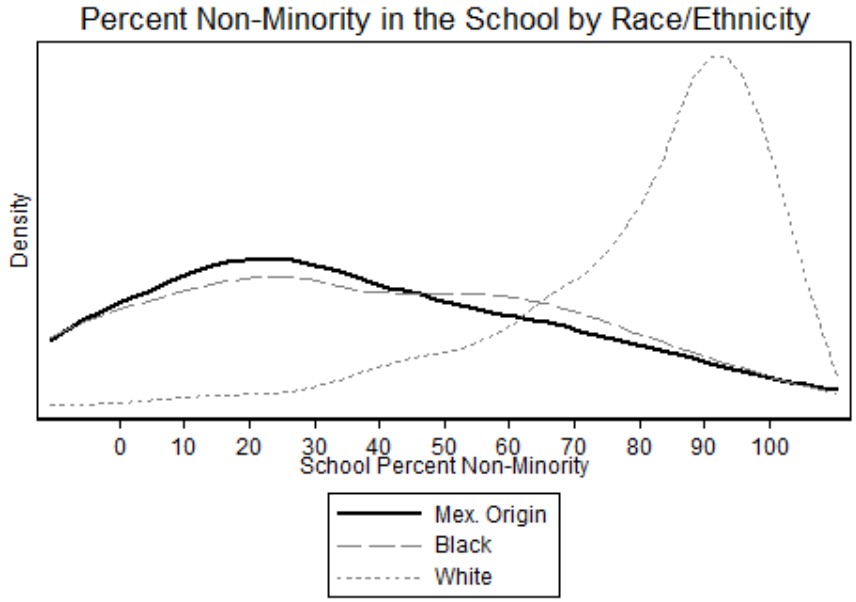

Figure 2.1. Percent of Non-Minority Students in the School by Student Race/Ethnicity, ELS:2002 Base-Year Sample.

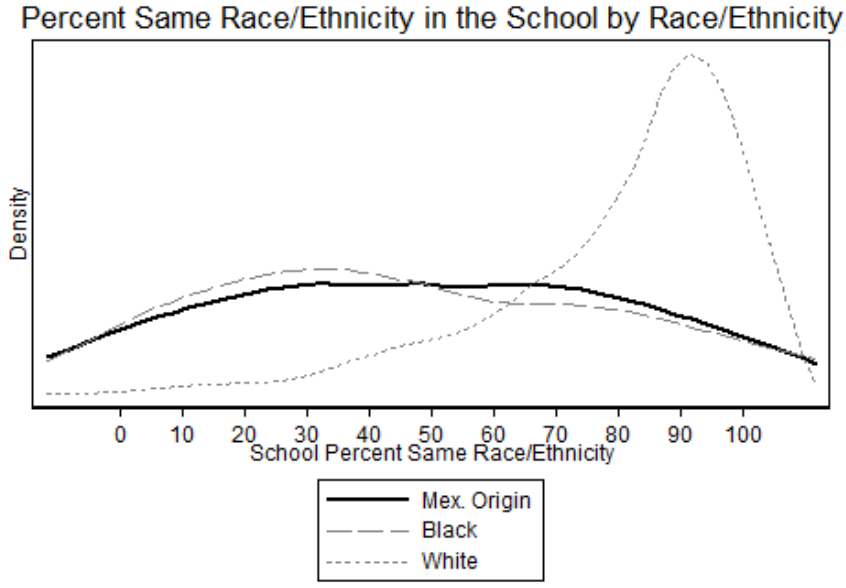

Figure 2.2. Percent of Same-Race/Ethnicity Students in the School by Student Race/Ethnicity, ELS:2002 Base-Year Sample.

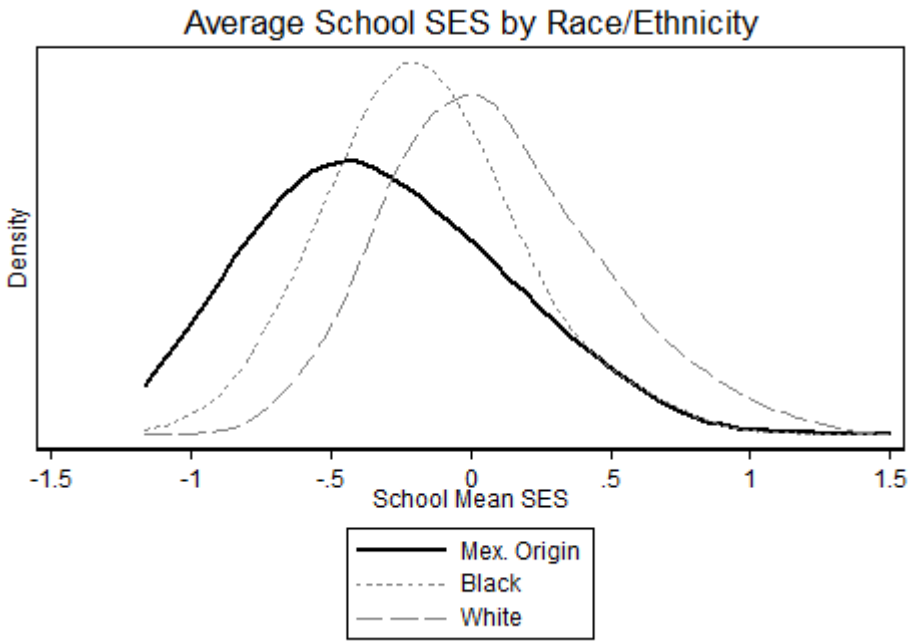

Figure 2.3. Mean Socioeconomic Status of Students in the School by Student Race/Ethnicity, ELS:2002 Base-Year Sample.

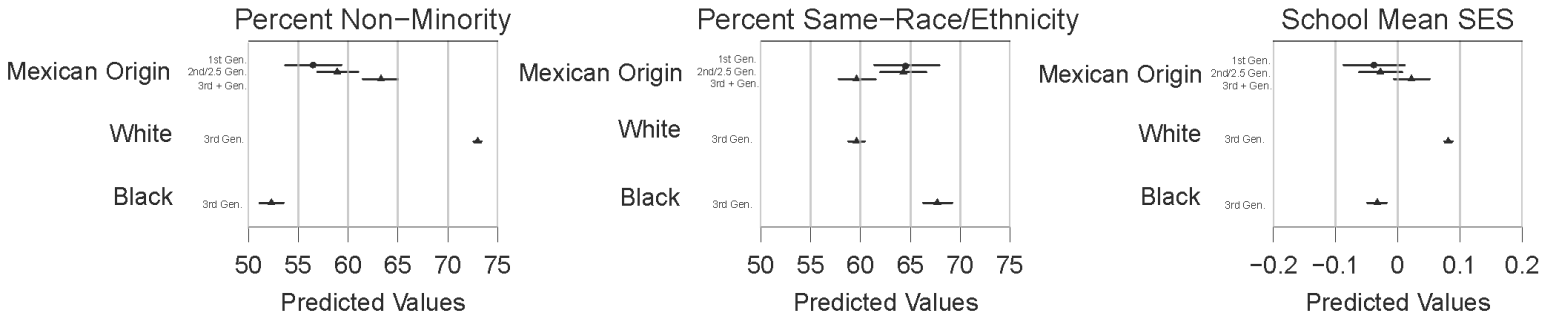

Figure 2.4. Predicted School Compositional Characteristics by Immigrant Generational Status Among Mexican Origin, White, and Black Youth, Base-Year ELS:2002.

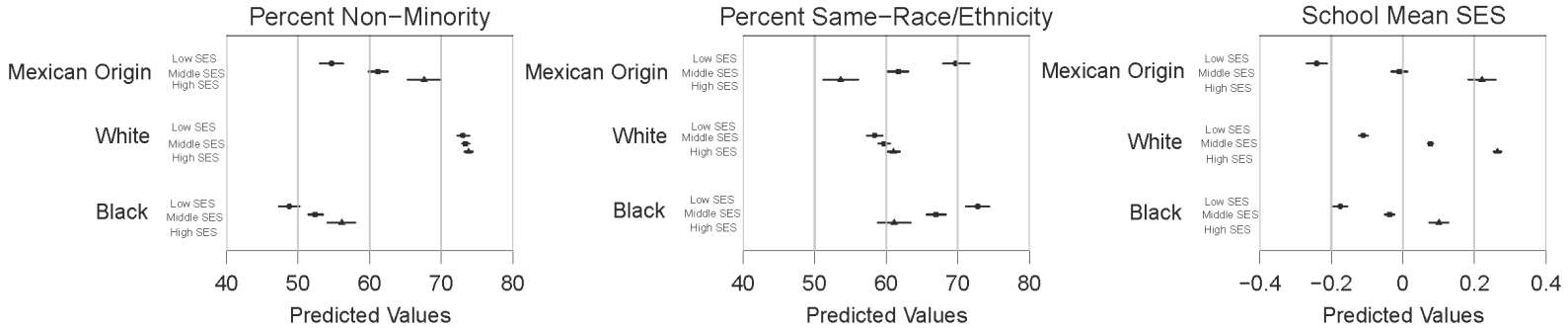

Figure 2.5. Predicted School Compositional Characteristics by Household Socioeconomic Status Among Mexican Origin, White, and Black Youth, Base-Year ELS:2002.

Table 2.1: Sample Characteristics by Race/Ethnicity, Base-Year ELS:2002 (Weighted)

			Latino (Any Race)				Non-Latino							
	Full Sample		Mexican Origin		Other		White		Black		Asian		Other Race	
	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error
Race/Ethnicity														
Mexican Origin Latino/a	11.0%	0.8%	100.0%	0.0%	na		na		na		na		na	
Latino-Other	4.9%	0.3%	na		100.0%	0.0%	na		na		na		na	
White	60.2%	1.0%	na		na		100.0%	0.0%	na		na		na	
Black	14.4%	0.7%	na		na		na		100.0%	0.0%	na		na	
Asian	3.9%	0.3%	na		na		na		na		100.0%	0.0%	na	
Other Race	5.5%	0.3%	na		na		na		na		na		100.0%	0.0%
Immigrant Generation														
3rd +	69.1%	0.7%	31.2%	2.1%	34.3%	2.7%	82.5%	0.6%	72.5%	1.4%	8.8%	1.5%	64.4%	2.2%
2nd/2.5	11.1%	0.4%	34.2%	1.8%	28.7%	2.2%	4.4%	0.3%	6.3%	0.8%	39.8%	1.9%	14.1%	1.5%
1.75	2.6%	0.2%	7.6%	0.8%	5.4%	1.0%	0.9%	0.2%	1.1%	0.2%	15.2%	1.3%	2.8%	0.6%
1st/FB Other	4.5%	0.3%	13.8%	1.2%	16.2%	1.8%	1.2%	0.2%	2.9%	0.5%	23.1%	1.7%	2.6%	0.6%
Missing Gen. Status	12.4%	0.5%	12.9%	1.1%	15.0%	1.8%	10.8%	0.6%	16.8%	1.1%	11.9%	1.4%	16.1%	1.5%
Socioeconomic Status														
Household SES Composite	-0.008	0.014	-0.551	0.032	-0.263	0.033	0.170	0.015	-0.248	0.019	0.033	0.046	-0.053	0.027
Family Composition														
Intact	56.8%	0.6%	58.0%	1.5%	45.4%	2.3%	63.6%	0.7%	31.5%	1.3%	71.8%	1.7%	46.3%	2.1%
Stepparent	16.7%	0.4%	16.5%	1.2%	21.3%	2.1%	16.0%	0.5%	18.0%	1.0%	11.7%	1.3%	20.0%	1.5%
Mother Only	19.0%	0.4%	17.3%	1.3%	24.3%	1.9%	14.2%	0.5%	39.7%	1.4%	9.6%	0.9%	22.9%	1.6%
Other	7.5%	0.3%	8.3%	0.8%	8.9%	1.4%	6.1%	0.4%	10.8%	0.8%	7.0%	0.9%	10.8%	1.4%
School Urbanicity and Place Size														
Central City, Large City	13.7%	1.1%	21.1%	3.2%	32.3%	3.4%	6.0%	0.7%	30.3%	3.1%	26.4%	3.1%	14.0%	1.8%
Central City, Mid-size City	16.0%	1.2%	26.1%	4.7%	13.0%	2.4%	13.6%	1.2%	19.8%	2.8%	17.1%	3.0%	13.5%	2.3%
Urban Fringe, Large City	29.1%	1.4%	34.3%	4.1%	35.6%	3.6%	28.4%	1.7%	22.7%	2.4%	41.5%	3.1%	27.5%	2.5%
Urban Fringe, Mid-size City	8.9%	1.0%	3.9%	1.4%	6.5%	1.3%	10.9%	1.3%	6.0%	1.2%	3.7%	0.9%	10.9%	1.9%
Large Town	1.4%	0.5%	1.8%	1.2%	0.1%	0.1%	1.7%	0.6%	0.7%	0.4%	1.6%	0.8%	0.6%	0.3%
Small Town	9.8%	1.1%	5.2%	1.7%	2.1%	0.6%	11.9%	1.4%	9.3%	1.7%	2.1%	0.6%	9.9%	2.4%
Rural	21.0%	0.9%	7.2%	1.4%	10.3%	2.2%	27.5%	1.3%	11.1%	1.6%	7.5%	1.5%	23.3%	3.0%
Missing	0.1%	0.1%	0.3%	0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.2%
School Sector														
Public	92.4%	0.3%	96.7%	0.6%	93.9%	1.0%	90.4%	0.5%	97.3%	0.4%	91.4%	1.5%	91.8%	1.1%
Catholic	4.2%	0.2%	2.5%	0.5%	4.1%	0.8%	5.2%	0.3%	1.8%	0.3%	4.1%	0.9%	3.7%	0.7%
Other Private	3.4%	0.2%	0.8%	0.2%	2.0%	0.7%	4.4%	0.4%	0.9%	0.2%	4.5%	1.2%	4.6%	0.9%
County Socio-Demographic Characteristics														
Non-Latino White (%)	69.3	0.7	50.3	1.7	53.7	1.6	77.5	0.6	58.5	1.1	56.6	1.5	67.8	1.5
Same-Race/Ethnicity (%)	54.8	0.7	26.6	1.9	15.2	1.1	77.5	0.6	26.0	1.1	9.8	0.9	6.1	1.4
Per Capita Income ($)	29,590.2	345.1	27,388.9	736.8	33,657.2	1,593.9	29,070.2	331.5	30,660.1	692.9	33,904.8	956.5	30,152.7	639.0
n	16,200		1,460		760		8,680		2,020		1,400		930	

Table 2.2. Mean School Compositional Characteristics by Race/Ethnicity and Immigrant Generational Status, Base-Year ELS:2002

	Non-minority students (%)		Same-Race/Ethnicity (%)		Average School SES	
	Est.	Std. Error	Est.	Std. Error	Est.	Std. Error
All	65.4	1.0	63.5	0.3	-0.008	0.004
Race/Ethnicity						
Mexican Origin Latino/a	35.9	2.1	48.6	0.9	-0.319	0.012
Latino- Other	41.7	2.0	31.1	1.2	-0.126	0.016
Asian	47.7	2.2	21.4	0.8	0.049	0.015
White	80.9	0.6	80.6	0.3	0.091	0.004
Black	37.4	1.7	47.3	0.8	-0.163	0.008
Other Race	61.3	2.2	7.4	0.7	-0.009	0.014
Immigrant Generation						
3rd +	71.7	0.9	68.8	0.4	0.031	0.004
2/2.5	46.5	1.7	47.9	0.9	-0.089	0.013
1.75	51.1	2.2	43.4	1.9	-0.092	0.025
1st/FB Other	39.7	1.9	42.8	1.3	-0.166	0.021
Immigrant generation by race/ethnicity						
Mexican origin						
3+	47.0	2.5	39.1	1.5	-0.168	0.020
2/2.5	31.5	2.7	54.2	1.6	-0.369	0.021
1.75	33.4	3.4	50.1	2.9	-0.394	0.037
1st/FB Other	29.6	2.7	52.4	2.3	-0.433	0.028
Latino- Other						
3+	51.2	3.3	22.4	1.6	-0.087	0.023
2/2.5	37.6	2.8	35.5	2.2	-0.113	0.032
1.75	43.9	7.0	33.0	6.2	-0.118	0.086
1st/FB Other	30.9	3.8	41.2	3.2	-0.225	0.039
Asian						
3+	51.6	5.9	26.5	4.1	0.138	0.067
2/2.5	46.2	2.5	23.3	1.3	0.080	0.023
1.75	57.2	3.4	17.1	1.9	0.063	0.032
1st/FB Other	44.4	3.1	19.0	1.4	-0.030	0.030
White						
3+	81.8	0.6	81.4	0.3	0.094	0.005
Black						
3+	38.2	1.7	48.3	0.9	-0.172	0.009
Other Race						
3+	65.2	2.6	8.0	0.9	-0.014	0.018
n	16,200		16,200		16,200	

Table 2.3. Predictors of the Percent of Non-Minority Students in the School, Base-Year ELS:2002

	Baseline Model			**Assimilation Hypothesis Models**								
	Model 0			Model 1			Model 2			Model 3		
	Est.	s.e	p	Est.	s.e	p	Est.	s.e.	p	Est.	s.e.	p
Race/Ethnicity												
Mexican Origin Latino/a	-44.6	0.8	0.000	-41.4	0.8	0.000	-39.4	0.9	0.000	-14.5	0.7	0.000
Black	-42.0	0.7	0.000	-41.4	0.7	0.000	-39.3	0.7	0.000	-20.6	0.6	0.000
Asian	-33.3	0.8	0.000	-28.2	1.0	0.000	-27.8	1.0	0.000	-10.8	0.7	0.000
Other Race (non-Latino)	-23.0	1.1	0.000	-21.5	1.1	0.000	-20.6	1.1	0.000	-10.4	0.8	0.000
Latino- Other	-35.3	1.2	0.000	-32.1	1.2	0.000	-30.8	1.2	0.000	-12.9	0.8	0.000
(Ref. White)												
Immigrant Generation												
2nd/2.5 Gen.				-6.5	0.8	0.000	-6.8	0.8	0.000	-0.2	0.5	0.765
1.75 Gen.				-2.1	1.4	0.114	-2.2	1.3	0.096	0.8	0.9	0.404
1st Gen./FB Other				-9.3	1.1	0.000	-8.7	1.1	0.000	-1.3	0.7	0.069
Missing Gen.				-4.8	0.6	0.000	-4.3	0.6	0.000	-1.0	0.5	0.035
(Ref. 3rd + Gen.)												
Socioeconomic status												
SES Composite							2.6	0.3	0.000	2.7	0.2	0.000
Family Composition												
Stepparent							-1.5	0.6	0.010	-0.9	0.4	0.021
Mom Only							-3.2	0.6	0.000	-1.1	0.4	0.005
Other							-3.7	0.8	0.000	-1.4	0.6	0.015
(Ref. Intact)												
School Urbanicity and Place Size												
Central City- Mid-Size City										5.9	0.6	0.000
Urban Fringe, Large City										12.6	0.6	0.000
Urban Fringe, Mid-Size City										15.0	0.7	0.000
Large Town										13.6	1.0	0.000
Small Town										13.4	0.6	0.000
Rural										16.3	0.6	0.000
(Ref. Central City- Large City)												
School Sector												
Catholic										15.8	0.5	0.000
Other Private										15.8	0.7	0.000
(Ref. Public)												
Composition												
Non-Latino White (%)										0.7	0.0	0.000
Race/Ethnic X Immigrant Gen.[a]												
Mex. Origin x 2/2.5												
Mex. Origin x 1.75												
Mex. Origin x 1st/FB other												
Race/Ethnic x SES												
Mex. Origin Latino X SES												
Black X SES												
Asian X SES												
Other Race X SES												
Latino-Other x SES												
Constant	82.3	0.2	0.000	83.3	0.2	0.000	83.5	0.3	0.000	10.8	1.4	0.000
State Fixed Effects	No			No			No			Yes		
R-squared	0.379			0.386			0.392			0.703		
BIC	140,671			140,545			140,425			130,098		
n	15,240			15,240			15,240			15,240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.3. (Cont'd.)

	Assimilation Hypothesis			Weak Racial Stratification Hypothesis		
	Model 4			Model 5		
	Est.	s.e.	p	Est.	s.e.	p
Race/Ethnicity						
Mexican Origin Latino/a	-9.9	0.9	0.000	-10.0	0.9	0.000
Black	-20.5	0.6	0.000	-20.9	0.6	0.000
Asian	-5.6	2.0	0.005	-7.0	2.0	0.000
Other Race (non-Latino)	-8.7	1.0	0.000	-9.2	1.0	0.000
Latino- Other	-11.5	1.2	0.000	-11.6	1.1	0.000
(Ref. White)						
Immigrant Generation						
2nd/2.5 Gen.	1.8	1.0	0.062	1.9	0.9	0.046
1.75 Gen.	4.7	2.1	0.024	4.7	2.1	0.025
1st Gen./FB Other	-1.5	2.2	0.486	-1.4	2.1	0.499
Missing Gen.	1.7	0.5	0.001	1.1	0.5	0.041
(Ref. 3rd + Gen.)						
Socioeconomic status						
SES Composite	2.6	0.2	0.000	0.4	0.3	0.137
Family Composition						
Stepparent	-1.0	0.4	0.008	-1.2	0.4	0.002
Mom Only	-1.2	0.4	0.003	-1.3	0.4	0.002
Other	-1.6	0.6	0.005	-1.8	0.6	0.002
(Ref. Intact)						
School Urbanicity and Place Size						
Central City- Mid-Size City	5.9	0.6	0.000	5.8	0.6	0.000
Urban Fringe, Large City	12.6	0.6	0.000	12.4	0.6	0.000
Urban Fringe, Mid-Size City	15.0	0.7	0.000	14.6	0.7	0.000
Large Town	13.8	1.0	0.000	13.7	1.0	0.000
Small Town	13.3	0.6	0.000	12.8	0.6	0.000
Rural	16.2	0.6	0.000	15.6	0.6	0.000
(Ref. Central City- Large City)				-12.2	3.3	0.000
School Sector						
Catholic	15.8	0.5	0.000	15.7	0.5	0.000
Other Private	15.7	0.6	0.000	16.1	0.6	0.000
(Ref. Public)						
Composition						
Non-Latino White (%)	0.7	0.0	0.000	0.7	0.0	0.000
Race/Ethnic X Immigrant Gen.[a]						
Mex. Origin x 2/2.5	-7.7	1.6	0.000	-6.2	1.6	0.000
Mex. Origin x 1.75	-10.8	3.0	0.000	-8.5	3.0	0.005
Mex. Origin x 1st/FB other	-8.0	2.6	0.002	-5.3	2.7	0.047
Race/Ethnic x SES						
Mex. Origin Latino X SES				6.1	0.8	0.000
Black X SES				3.2	0.7	0.000
Asian X SES				3.9	0.6	0.000
Other Race X SES				3.7	1.1	0.001
Latino-Other x SES				7.5	0.9	0.000
Constant	10.6	1.3	0.000	11.5	1.3	0.000
State Fixed Effects	Yes			Yes		
R-squared	0.705			0.708		
BIC	130,162			130,055		
n	15,240			15,240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.4. Predictors of the Percent of Students of the Same Race/Ethnicity in the School, Base-Year ELS:2002

	Baseline Model			Assimilation Hypothesis Models								
	Model 0			Model 1			Model 2			Model 3		
	Est.	s.e	p	Est.	s.e	p	Est.	s.e.	p	Est.	s.e	p
Race/Ethnicity												
Mexican Origin Latino	-35.8	0.8	0.000	-35.5	0.9	0.000	-37.5	0.9	0.000	5.3	0.9	0.000
Black	-35.7	0.7	0.000	-35.7	0.7	0.000	-36.9	0.8	0.000	8.0	0.9	0.000
Asian	-61.2	0.6	0.000	-60.6	0.8	0.000	-61.0	0.8	0.000	-3.4	1.0	0.001
Other Race (non-Latino)	-73.7	0.8	0.000	-73.7	0.8	0.000	-74.2	0.8	0.000	-11.2	1.0	0.000
Latino- Other	-56.0	1.0	0.000	-55.7	1.0	0.000	-56.5	1.0	0.000	-1.2	1.1	0.275
(Ref. White)												
Immigrant Generation												
2nd/2.5 Gen.				0.5	0.7	0.528	0.4	0.7	0.550	1.4	0.5	0.013
1.75 Gen.				-2.6	1.2	0.027	-3.0	1.2	0.011	1.1	0.9	0.249
<1.75 Gen./FB Other				-2.0	1.0	0.058	-2.8	1.0	0.006	0.1	0.8	0.933
Missing Gen.				0.3	0.6	0.673	-0.2	0.6	0.701	0.9	0.5	0.081
(Ref. 3rd + Gen.)												
Socioeconomic status												
SES Composite							-3.2	0.3	0.000	-1.8	0.2	0.000
Family Composition												
Stepparent							-1.8	0.5	0.001	-1.1	0.4	0.006
Mom Only							0.0	0.6	0.940	-0.1	0.4	0.878
Other							-0.6	0.8	0.483	-0.5	0.6	0.386
(Ref. Intact)												
School Location												
Central City- Mid-Size City										-10.7	0.6	0.000
Urban Fringe, Large City										-5.5	0.6	0.000
Urban Fringe, Mid-Size City										-9.3	0.7	0.000
Large Town										-11.5	0.9	0.000
Small Town										-11.3	0.6	0.000
Rural										-9.9	0.6	0.000
(Ref. Central City- Large City)												
School Sector												
Catholic										2.7	0.5	0.000
Other Private										8.2	0.7	0.000
(Ref. Public)												
County Composition												
Same-Race/Ethnicity (%)										0.9	0.0	0.000
Race/Ethnic X Immigrant Gen.[a]												
Mex. Origin x 2/2.5												
Mex. Origin x 1.75												
Mex. Origin x 1st/FB other												
Race/Ethnic x SES												
Mex. Origin Latino X SES												
Black X SES												
Asian X SES												
Other Race X SES												
Latino-Other x SES												
Constant	82.0	0.2	0.000	82.0	0.2	0.000	83.0	0.3	0.000	25.2	1.5	0.000
State Fixed Effects	No			No			No			Yes		
R-squared	0.557			0.558			0.562			0.745		
BIC	139,208			139,234			139,128			131,417		
n	15,240			15,240			15,240			15,240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.4. (Cont'd.)

	Assimilation Hypothesis			Weak Racial Stratification Hypothesis		
	Model 4			Model 5		
	Est.	s.e	p	Est.	s.e	p
Race/Ethnicity						
Mexican Origin Latino	0.3	1.1	0.826	0.4	1.1	0.706
Black	8.4	0.9	0.000	8.4	1.0	0.000
Asian	-0.2	2.1	0.925	0.6	2.1	0.781
Other Race (non-Latino)	-10.9	1.2	0.000	-9.9	1.2	0.000
Latino- Other	-4.8	1.3	0.000	-4.1	1.3	0.002
(Ref. White)						
Immigrant Generation						
2nd/2.5 Gen.	1.8	0.9	0.050	1.6	0.9	0.073
1.75 Gen.	3.7	2.1	0.075	3.8	2.1	0.070
<1.75 Gen./FB Other	-2.7	2.1	0.193	-2.8	2.1	0.182
Missing Gen.	-0.8	0.6	0.151	0.0	0.6	0.991
(Ref. 3rd + Gen.)						
Socioeconomic status						
SES Composite	-1.6	0.2	0.000	1.3	0.3	0.000
Family Composition						
Stepparent	-1.0	0.4	0.015	-0.7	0.4	0.104
Mom Only	-0.1	0.4	0.858	-0.2	0.4	0.686
Other	-0.3	0.6	0.584	-0.2	0.6	0.751
(Ref. Intact)						
School Location						
Central City- Mid-Size City	-10.6	0.6	0.000	-10.6	0.6	0.000
Urban Fringe, Large City	-5.5	0.6	0.000	-5.5	0.6	0.000
Urban Fringe, Mid-Size City	-9.2	0.7	0.000	-8.9	0.7	0.000
Large Town	-11.7	0.9	0.000	-11.8	1.0	0.000
Small Town	-11.2	0.6	0.000	-10.9	0.6	0.000
Rural	-9.7	0.6	0.000	-9.2	0.6	0.000
(Ref. Central City- Large City)	-0.9	3.3	0.786	-0.9	3.1	0.783
School Sector						
Catholic	2.7	0.5	0.000	2.9	0.5	0.000
Other Private	8.1	0.6	0.000	7.6	0.6	0.000
(Ref. Public)						
County Composition						
Same-Race/Ethnicity (%)	0.9	0.0	0.000	0.9	0.0	0.000
Race/Ethnic X Immigrant Gen.[a]						
Mex. Origin x 2/2.5	5.8	1.7	0.001	3.1	1.7	0.066
Mex. Origin x 1.75	4.6	3.1	0.138	0.6	3.2	0.846
Mex. Origin x 1st/FB other	12.6	2.7	0.000	7.9	2.8	0.005
Race/Ethnic x SES						
Mex. Origin Latino X SES				-9.4	0.9	0.000
Black X SES				-7.2	0.8	0.000
Asian X SES				-2.0	0.6	0.001
Other Race X SES				-7.0	0.9	0.000
Latino-Other x SES				-8.1	1.0	0.000
Constant	25.6	1.5	0.000	24.1	1.5	0.000
State Fixed Effects	Yes			Yes		
R-squared	0.748			0.753		
BIC	131,455			131,198		
n	15,240			15,240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.5. Predictors of Mean School Socioeconomic Status, Base-Year ELS:2002

	Baseline Model			Assimilation Hypothesis Models								
	Model 0			Model 1			Model 2			Model 3		
	Est.	s.e	p	Est.	s.e	p	Est.	s.e.	p	Est.	s.e	p
Race/Ethnicity												
Mexican Origin Latino	-0.409	0.012	0.000	-0.412	0.014	0.000	-0.208	0.012	0.000	-0.122	0.011	0.000
Black	-0.277	0.009	0.000	-0.272	0.009	0.000	-0.140	0.009	0.000	-0.105	0.008	0.000
Asian	-0.096	0.013	0.000	-0.095	0.016	0.000	-0.055	0.014	0.000	0.018	0.012	0.126
Other Race (non-Latino)	-0.123	0.013	0.000	-0.122	0.014	0.000	-0.062	0.012	0.000	-0.047	0.010	0.000
Latino- Other	-0.165	0.017	0.000	-0.162	0.017	0.000	-0.059	0.015	0.000	-0.090	0.012	0.000
(Ref. White)												
Immigrant Generation												
2nd/2.5 Gen.				0.043	0.013	0.001	0.037	0.011	0.001	0.008	0.009	0.380
1.75 Gen.				-0.013	0.021	0.528	0.010	0.018	0.581	-0.011	0.015	0.457
<1.75 Gen./FB Other				-0.058	0.018	0.001	0.023	0.015	0.128	-0.017	0.013	0.201
Missing Gen.				-0.068	0.010	0.000	-0.018	0.009	0.048	-0.027	0.007	0.000
(Ref. 3rd + Gen.)												
Socioeconomic status												
SES Composite				0.288			0.303	0.004	0.000	0.184	0.004	0.000
Family Composition				0.703								
Stepparent							-0.065	0.008	0.000	-0.015	0.006	0.018
Mom Only							-0.003	0.008	0.751	0.003	0.006	0.640
Other							-0.051	0.011	0.000	-0.023	0.009	0.012
(Ref. Intact)												
School Location												
Central City- Mid-Size City										0.158	0.009	0.000
Urban Fringe, Large City										0.193	0.008	0.000
Urban Fringe, Mid-Size City										0.177	0.011	0.000
Large Town										0.202	0.020	0.000
Small Town										0.056	0.010	0.000
Rural										0.118	0.009	0.000
(Ref. Central City- Large City)												
School Sector												
Catholic										0.422	0.008	0.000
Other Private										0.495	0.010	0.000
(Ref. Public)												
County Composition												
Per Capita Income (log)										0.354	0.012	0.000
Race/Ethnic X Immigrant Gen.[a]												
Mex. Origin x 2/2.5												
Mex. Origin x 1.75												
Mex. Origin x 1st/FB other												
Race/Ethnic x SES												
Mex. Origin Latino X SES												
Black X SES												
Asian X SES												
Other Race X SES												
Latino-Other x SES												
State Fixed Effects	No			No			No			Yes		
Constant	0.151	0.004	0.000	0.157	0.005	0.000	0.098	0.004	0.000	-3.839	0.127	0.000
R-squared	0.102			0.107			0.355			0.599		
BIC	16240			16191			11265			4583		
n	15240			15240			15240			15240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.5. (Cont'd.)

	Assimilation Hypothesis Model 4			Weak Racial Stratification Hypothesis Model 5		
	Est.	s.e	p	Est.	s.e	p
Race/Ethnicity						
Mexican Origin Latino	-0.069	0.015	0.000	-0.061	0.015	0.000
Black	-0.103	0.008	0.000	-0.113	0.009	0.000
Asian	0.028	0.040	0.476	0.028	0.040	0.487
Other Race (non-Latino)	-0.046	0.013	0.000	-0.045	0.013	0.000
Latino- Other	-0.074	0.016	0.000	-0.072	0.016	0.000
(Ref. White)						
Immigrant Generation						
2nd/2.5 Gen.	0.023	0.015	0.124	0.022	0.015	0.139
1.75 Gen.	-0.022	0.029	0.446	-0.023	0.029	0.432
<1.75 Gen./FB Other	0.030	0.036	0.402	0.029	0.036	0.421
Missing Gen.	-0.003	0.009	0.711	-0.002	0.009	0.817
(Ref. 3rd + Gen.)						
Socioeconomic status						
SES Composite	0.182	0.004	0.000	0.187	0.005	0.000
Family Composition						
Stepparent	-0.016	0.006	0.011	-0.017	0.006	0.008
Mom Only	0.002	0.006	0.717	0.000	0.006	0.970
Other	-0.024	0.009	0.009	-0.024	0.009	0.007
(Ref. Intact)						
School Location						
Central City- Mid-Size City	0.158	0.009	0.000	0.157	0.009	0.000
Urban Fringe, Large City	0.193	0.008	0.000	0.192	0.008	0.000
Urban Fringe, Mid-Size City	0.177	0.011	0.000	0.177	0.011	0.000
Large Town	0.202	0.020	0.000	0.203	0.020	0.000
Small Town	0.055	0.010	0.000	0.055	0.010	0.000
Rural	0.117	0.009	0.000	0.117	0.009	0.000
(Ref. Central City- Large City)						
School Sector						
Catholic	0.422	0.008	0.000	0.419	0.008	0.000
Other Private	0.495	0.010	0.000	0.494	0.010	0.000
(Ref. Public)						
County Composition						
Per Capita Income (log)	0.352	0.012	0.000	0.355	0.012	0.000
Race/Ethnic X Immigrant Gen.[a]						
Mex. Origin x 2/2.5	-0.094	0.025	0.000	-0.072	0.026	0.006
Mex. Origin x 1.75	-0.040	0.047	0.394	-0.011	0.048	0.826
Mex. Origin x 1st/FB other	-0.126	0.044	0.005	-0.089	0.045	0.050
Race/Ethnic x SES						
Mex. Origin Latino X SES				0.044	0.014	0.001
Black X SES				-0.050	0.010	0.000
Asian X SES				-0.005	0.012	0.692
Other Race X SES				-0.032	0.015	0.028
Latino-Other x SES				0.001	0.015	0.928
State Fixed Effects	Yes			Yes		
Constant	-3.822	0.128	0.000	-3.853	0.128	0.000
R-squared	0.601			0.602		
BIC	4722			4722		
n	15240			15240		

[a] Coefficients for other race/ethnicity by immigrant generational status interaction terms are not displayed, but are available upon request.

Table 2.6. Predicted School Racial/Ethnic and Socioeconomic Compositional Characteristics, Immigrant Generational Groups by Race/Ethnicity, Base-Year ELS:2002

	% Non-Minority			% Same Race/Ethnicity			Mean SES		
Racial/Ethnic and Generational Group	prob.	lower CI	upper CI	prob.	lower CI	upper CI	prob.	lower CI	upper CI
Mexican origin									
3rd + Generation	63.3	61.5	65.0	59.6	57.8	61.5	0.022	-0.006	0.051
2/2.5 Gen.	58.9	56.9	61.0	64.3	62.0	66.6	-0.028	-0.062	0.007
1.75 Gen.	59.4	55.4	63.5	64.0	59.5	68.5	-0.011	-0.081	0.059
1st/FB Other	56.5	53.7	59.3	64.7	61.4	67.9	-0.038	-0.087	0.011
NL White *(3rd + Generation)*	73.0	72.6	73.4	59.6	58.8	60.4	0.081	0.075	0.088
NL Black *(3rd + Generation)*	52.3	51.1	53.5	67.7	66.3	69.2	-0.033	-0.049	-0.018
Latino- Other									
3rd + Generation	61.7	59.5	63.9	55.1	52.9	57.3	0.009	-0.022	0.041
2/2.5 Gen.	61.4	59.0	63.7	61.2	58.4	64.1	0.002	-0.038	0.043
1.75 Gen.	60.7	55.9	65.5	59.6	53.0	66.1	-0.022	-0.103	0.059
1st/FB Other	61.1	57.7	64.4	61.6	57.5	65.6	-0.016	-0.072	0.040
Asian									
3rd + Generation	66.1	62.2	70.0	60.1	56.2	64.0	0.109	0.032	0.186
2/2.5 Gen.	61.4	59.9	62.9	58.7	57.0	60.4	0.120	0.091	0.150
1.75 Gen.	63.2	60.8	65.7	56.5	54.0	59.0	0.105	0.062	0.147
1st/FB Other	62.2	60.4	63.9	55.4	53.7	57.1	0.070	0.033	0.107
NL Other Race *(3rd + Generation)*	64.0	62.1	65.8	49.4	47.6	51.2	0.035	0.010	0.060

Note: Results obtained from full model, Model 5, in each OLS regression. Values of other covariates are held at their means.

Table 2.7. Predicted School Racial/Ethnic and Socioeconomic Compositional Characteristics, Socioeconomic Groups by Race/Ethnicity, Base-Year ELS:2002

	% Non-Minority			% Same Race/Ethnicity			Mean SES		
Racial/Ethnic and SES Group	prob.	lower CI	upper CI	prob.	lower CI	upper CI	prob.	lower CI	upper CI
Mexican Origin									
Low SES	54.7	53.0	56.3	69.7	67.9	71.6	-0.240	-0.269	-0.212
Mean SES	61.1	59.8	62.5	61.7	60.2	63.1	-0.010	-0.032	0.012
High SES	67.6	65.3	69.9	53.6	51.2	56.1	0.221	0.183	0.259
Non-Latino White									
Low SES	73.0	72.2	73.9	58.4	57.3	59.5	-0.110	-0.123	-0.097
Mean SES	73.4	72.9	73.9	59.7	58.9	60.5	0.077	0.069	0.085
High SES	73.8	73.2	74.4	61.0	60.2	61.9	0.264	0.253	0.275
Non-Latino Black									
Low SES	48.8	47.3	50.2	72.8	71.1	74.4	-0.174	-0.194	-0.155
Mean SES	52.4	51.4	53.5	66.9	65.6	68.3	-0.037	-0.051	-0.023
High SES	56.1	54.1	58.0	61.1	58.8	63.4	0.101	0.074	0.127
Latino Other									
Low SES	52.7	50.4	54.9	63.8	61.4	66.3	-0.198	-0.233	-0.164
Mean SES	60.6	59.0	62.1	57.1	55.4	58.8	-0.010	-0.033	0.013
High SES	68.4	66.1	70.8	50.3	47.7	53.0	0.178	0.141	0.216
Asian									
Low SES	59.5	56.6	62.5	60.2	57.2	63.1	-0.089	-0.147	-0.032
Mean SES	63.8	61.2	66.4	59.5	56.8	62.2	0.093	0.042	0.145
High SES	68.0	65.4	70.7	58.9	56.1	61.7	0.276	0.221	0.330
Non-Latino Other Race									
Low SES	58.4	55.8	61.0	55.1	52.4	57.7	-0.126	-0.158	-0.094
Mean SES	62.5	61.1	64.0	49.4	47.9	50.9	0.029	0.010	0.048
High SES	66.7	64.2	69.1	43.8	41.7	45.8	0.184	0.149	0.219

Note: Results obtained from full model, Model 5, in each OLS regression. Values of other covariates are held at their means.

CHAPTER 3: HARMFUL OR HELPFUL? SCHOOL COMPOSITION AND PATTERNS OF SCHOOL DROPOUT AMONG MEXICAN ORIGIN YOUTH

I. INTRODUCTION

Mexican origin youth have the highest risk of dropping out of school of any major racial/ethnic group in U.S. schools. In 2007, the status dropout rate—the percentage of 16-24 year-olds who had not earned a high school credential and were not enrolled in school—was 22.2% for Mexican origin young adults, nearly double the status dropout rate of blacks and almost four times the status dropout rate of non-Latino whites (National Center for Education Statistics 2010). While foreign-born status increases the risk of school attrition for Mexican origin youth (Hirschman 2001), even U.S.-born Mexican origin adolescents have a significantly higher likelihood of dropping out of school than their U.S.-born non-Latino counterparts (Landale et al. 1998; National Center for Education Statistics 2010). Disparities in school dropout rates between Mexican origin youth and their peers could have lasting impacts on socioeconomic inequality in the United States as Mexican origin Latino/as make up increasing shares of the overall school-age population (Johnson and Lichter 2010).

In this chapter, I determine whether isolation in high-minority, high-poverty schools contributes to high dropout rates among Mexican origin youth. Theories of educational stratification and immigrant assimilation both suggest that isolation in high-minority, high-poverty schools can increase the risk of school attrition among Mexican origin youth. Research on school compositional effects has shown that exposure to non-minority and socioeconomically advantaged peers in schools can have positive effects on the educational outcomes of students, above and beyond students' social origins (Coleman et al. 1966; Van Ewijk and Sleegers 2010;

Mickelson et al. 2013; Palardy 2013; Rumberger and Palardy 2005). The "segmented assimilation" (Portes and Rumbaut 2001) and "double disadvantage" (Crosnoe 2005) perspectives also posit that Mexican origin youth are negatively affected by attending high-poverty, high-minority schools. These frameworks also suggest that Mexican origin youth are more vulnerable to school compositional effects on their educational outcomes than other students.

The empirical evidence, however, does not clearly demonstrate that Mexican origin youth exhibit improved educational outcomes as they gain exposure to non-minority and non-poor students in schools. Some studies find that exposure to poor and minority youth has a negative net impact on the educational outcomes of Mexican origin and Latino/a students (Crosnoe 2005; Pong and Hao 2007; Ryabov and Van Hook 2007). However, other studies find that Latino/a students have better educational outcomes in schools with higher concentrations of co-ethnic Latino/a peers (Goldsmith 2003; Lee and Klugman 2013; Potochnick and Handa Forthcoming). Potochnick and Handa (Forthcoming) refer to this situation as a "Latino paradox," because isolation with Latino/as has a positive rather than a negative association with Latino/a student outcomes.

Other scholars find that Latino/a and Mexican origin youth experience worse educational outcomes as they gain increasing exposure to socioeconomically advantaged students (Crosnoe 2009; Portes and Hao 2004). For example, Portes and Hao (2004) find that second-generation Mexican origin youth in the Children of Immigrants Longitudinal Study (CILS) have an *increased* risk of dropping out of school as they gain exposure to students from higher socioeconomic status (SES) households, net of individual and household background predictors of dropout. Portes and Hao argue that, "dropping out of school represents a 'solution' for

students who confront more competitive school environments where the handicaps associated with their own background become highly visible, subjecting them to greater discrimination by others" (11926). For Mexican origin youth, exposure to non-minority and affluent students could lead to disengagement from school a means of coping with relative deprivation, cultural conflict, negative competition, or stereotype threat (Jencks and Mayer 1990; Portes and Hao 2004; Steele 1997).

Finally, it is possible that Mexican origin dropout is unrelated to schooling characteristics such as peer composition. Mexican origin youth are not sorted randomly across schools. The factors that influence student selection into schools, such as nativity, duration of residence, and socioeconomic status, may also shape the process of school dropout. Any observed relationship between school composition and dropout among Mexican origin youth may simply be a reflection of unequal sorting among Mexican origin youth across schools. In fact, one prior study finds that the relationship classroom socioeconomic composition and student outcomes becomes small or non-significant once mechanisms of selection into classrooms are taken into account (Lauen and Gaddis 2013).

In this chapter, I use the restricted-use Educational Longitudinal Study of 2002 (ELS:2002) to evaluate how school racial/ethnic and socioeconomic composition influences patterns of school dropout among Mexican origin youth. My analysis focuses on answering two questions. First, do Mexican origin youth who have greater exposure to non-minority and non-poor students have a lower risk of dropping out of school than their peers in high-poverty, high-minority schools? Second, are Mexican origin youth more vulnerable to school compositional influences on their risk of dropout than students from other racial/ethnic groups?

My work contributes to research on school compositional influences on student outcomes and Mexican origin patterns of incorporation in several ways. First, I focus on Mexican origin youth as a Latino/a subgroup of interest. Prior studies have examined the association between school composition and student outcomes among nationally representative samples of Latino/a students (Crosnoe 2009; Goldsmith 2003; Lee and Klugman 2013; Potochnick and Handa Forthcoming; Ryabov and Van Hook 2007), the children of Mexican immigrants in elementary school (Crosnoe 2005), and second-generation Mexican origin youth in the CILS (Portes and Hao 2004). As discussed, this prior research is far from conclusive about the magnitude and direction of the relationship between exposure to non-minority and non-poor students and Latino/a and Mexican origin educational outcomes. I advance knowledge of subgroup differences in school compositional influences on student outcomes by analyzing Mexican origin Latino/a youth in a nationally representative sample, the ELS:2002.

Second, I scrutinize school composition as an explanation for Mexican origin educational disadvantages vis-à-vis factors related to social origins. Scholars are currently engaged in a vigorous debate over the educational and socioeconomic fate of the Mexican origin population, especially the second and higher generations (Alba et al. 2013; Bean and Stevens 2003; Perlmann and Waldinger 1997; Portes and Rumbaut 2001; Telles and Ortiz 2008; Waldinger and Feliciano 2004; Waldinger and Perlmann 1998). While some scholars have argued that isolation in high-minority, high-poverty schools hinders the educational mobility of Mexican origin youth above and beyond the disadvantaged social origins of their households (Portes and Rumbaut 2001; Telles and Ortiz 2008), this premise has not been scrutinized empirically using nationally representative data that includes Mexican origin high school students. My work sheds greater

light on the degree to which Mexican origin educational disadvantages can be attributed to the racial/ethnic and socioeconomic composition of the schools that they attend.

This analysis draws from the literatures on educational stratification, immigrant assimilation, and neighborhood effects in order to highlight the mechanisms through which school composition may influence dropout patterns among Mexican origin youth. I review these literatures below and discuss their implications for research on school compositional effects and patterns of dropout among Mexican origin youth. I also highlight the empirical evidence that supports or refutes these theories.

II. BACKGROUND

The Negative Impacts of High-Minority, High-Poverty Schools on the Educational Outcomes of Students

Theories of educational stratification and immigrant incorporation enumerate the ways that high-minority, high-poverty school environments can have negative impacts on student outcomes, above and beyond factors related to social origins. While the Coleman Report (1966) showed that the majority of variation in student test scores was within rather than between schools, it also demonstrated that peer socioeconomic composition could impact student achievement above and beyond a student's own socioeconomic status. More recent studies show a significant positive relationship between educational achievement and attainment and exposure to non-minority and higher SES students in schools. In fact, one study estimates that the average socioeconomic status of peers in school has an impact on student achievement growth that is similar in magnitude to a student's own household socioeconomic status (Rumberger and Palardy 2005).

Attending high-poverty, high-minority schools could increase the risk of dropout among Mexican origin youth in several ways. Schools with high concentrations of minority and poor students often have fewer resources to promote positive student achievement and educational attainment outcomes than schools with higher proportions of non-minority and non-poor students (Jencks and Mayer 1990; Kozol 2012). A lack of resources—rather than school composition itself—may to blame for negative educational outcomes among students in high-minority, high-poverty schools.

Education researchers continue to debate the extent to which disparities in school resources drive educational achievement gaps (Card and Krueger 1996; Greenwald, Hedges, and Laine 1996; Hanushek 1997; Jennings et al. 2015). However, most researchers agree that high-minority, high-poverty schools are under-resourced relative to those with higher concentrations of non-minority and non-poor students. For instance, high-minority, high-poverty schools are less likely to attract and retain experienced and high-quality teachers relative to those with lower concentrations of minority and poor students (Hanushek, Kain, and Rivkin 2004). Ethnographic studies such as *Savage Inequalities* (Kozol 2012) also depict a striking lack of funding and inadequate facilities for students in high-minority, high-poverty schools.

The racial/ethnic and socioeconomic composition or peers in schools may also impact the process of Mexican origin dropout through direct or indirect peer influences on norms and behaviors (Jencks and Mayer 1990). Student minority status is highly correlated with household socioeconomic status. Higher SES schools represent aggregations of students whose parents have engaged in "concerted cultivation"—a process that teaches children the values, norms, and behaviors that are rewarded in educational and occupational markets (Lareau 2011). In socioeconomically integrated schools, Mexican origin youth from disadvantaged households

could learn to develop the positive academic behaviors that are presumably exhibited by their higher SES peers through direct socialization or through an indirect "epidemic" model of behavior (Jencks and Mayer 1990).

Conversely, peers in high-poverty, high-poverty schools could be a liability for Mexican origin youth if they propagate or reinforce norms, attitudes, and behaviors that promote school dropout (Portes and Rumbaut 2001). The oppositional identity framework argues that "caste-like" minorities—those incorporated into the United States through slavery, conquest, or territorial acquisition—reject the institution of schooling as an adaptive response to pervasive discrimination (Gibson and Ogbu 1991; Matute-Bianchi 1986; Ogbu and Matute-Bianchi 1986). While they are an immigrant origin population, Mexican origin youth have been framed as a "caste-like" minority in prior research on disadvantaged minority student outcomes (Matute-Bianchi 1986).

The main problem with the oppositional identity hypothesis is weakened by the fact that anti-school attitudes are not widespread among minority students. Black and Latino/a students have high educational aspirations and expectations and show high levels of educational optimism and pro-school attitudes (Ainsworth-Darnell and Downey 1998; Carter 2005; Goldsmith 2004; Harris 2011; Kao and Tienda 1998, 2005). Nonetheless, it is still possible that exposure to students from more advantaged backgrounds could help disadvantaged students such as Mexican origin youth to develop behaviors that promote attachment to schooling.

The collective socialization model of school and neighborhood effects also argues that schools with lower proportions of minority and poor students may have stronger networks of adults (parents, teachers, and administrators) that can teach, monitor, and reinforce norms and behaviors that promote positive educational outcomes (Coleman 1988; Jencks and Mayer 1990).

Parental collective action in higher SES schools could also influence the quality of school institutional resources in a way that benefits all students. For instance, parents from more affluent backgrounds may collectively hold teachers accountable for their actions towards students and/or to request the implementation of specialized educational services schools (Horvat, Weininger, and Lareau 2003). Mexican origin children attending higher SES schools could benefit from these types of parental efforts.

Theories of immigrant assimilation and incorporation specifically propose that high-minority, high-poverty schools are detrimental environments for adolescents from Mexican immigrant families. The segmented assimilation model of immigrant incorporation argues that, because they are isolated in high-minority, high-poverty schools, all of the children of immigrants are potentially at risk of adopting the norms of "inner-city subcultures," which are inimical to positive schooling outcomes (Portes and Rumbaut 2001; Portes and Zhou 1993; Zhou 1997a, 1997b). According to the proponents of the segmented assimilation perspective, strong ties within immigrant families and co-ethnic communities can help the children of immigrants to overcome the negative effects of high-minority, high-poverty schooling contexts on their educational outcomes by providing countervailing messages and social support. However, Portes and Rumbaut (2001) assert that the children of Mexican immigrants have insufficient household and co-ethnic resources to confront schools with high concentrations of minority and poor students. This lack of protective resources, they argue, makes the children of Mexican immigrants susceptible to adopting an oppositional standpoint towards schooling and putting them at risk of "downward assimilation" through withdrawal from the institution of schooling.

In his formulation of the "double disadvantage" scenario, Crosnoe (2005) similarly argues that Mexican origin youth may be particularly vulnerable to experiencing negative

educational outcomes in schools with high concentrations of minority and poor students. In the "double disadvantage" framework, Mexican origin students are more likely to be isolated in problematic schools, including those with high concentrations of minority students and poor students, than their peers. Additionally, because they are a disadvantaged minority group, Mexican origin students may be less resilient to the impact of high-minority, high-poverty schooling contexts on their educational outcomes than other students.

Some prior studies support the claim that isolation in high-minority, high-poverty schools has a negative impact on the educational outcomes of Mexican origin and Latino/a youth. Crosnoe (2005) shows that the children of Mexican immigrants in the ECLS-K have lower math scores as the percentage of minority students in their schools increases. Using Add Health, Pong and Hao (2007) also show that the socioeconomic status of co-ethnic peers in the neighborhoods where the children of immigrants live is positively related to GPA. Ryabov and Van Hook (2007) also find that the socioeconomic status of peers in schools has a net positive association with achievement among both foreign-born and U.S.-born Latinos.

Even so, the evidence that Mexican origin youth benefit educationally from exposure to non-minority and non-poor peers in schools is far from conclusive. As I will discuss in the next section, some studies find that Mexican origin and Latino/a students perform better educationally in schools where they are isolated with co-ethnic Latino/a students and worse as they gain exposure to white and affluent youth.

The Latino Paradox? The Benefits of Co-Ethnic Concentration in Schools and Drawbacks of Exposure to White and Affluent Youth

There are several theoretical reasons to believe that exposure to non-minority and non-poor students will not reduce the likelihood of dropout among Mexican origin youth, but may in fact increase their risk of dropout. A number of recent studies reveal "paradoxes" of

racial/ethnic and socioeconomic isolation—situations where isolation in schools with co-ethnic or poor students is associated with positive educational outcomes, and exposure to non-minority and affluent students associated with negative outcomes—among minority and poor students (Benner and Crosnoe 2011; Crosnoe 2009; Goldsmith 2003; Owens 2010; Potochnick and Handa Forthcoming).

Mexican origin youth may have an increased risk of dropout as they gain exposure to non-minority and non-poor students due to social comparison processes. Minority and poor youth, such as Mexican origin youth, may feel a greater sense of relative deprivation or cultural conflict with peers in schools with higher proportions of white and/or affluent students (Jencks and Mayer 1990). Additionally, exposure to white and affluent students in school may lead to the enactment of stereotype threat for minority students such as Mexican origin youth.

Stereotype threat theory posits that the enactment of a stereotype leads members of the group that is being stereotyped to embody the negative behavior that is associated with their group (Steele 1997). For example, women may perform worse on a math achievement test if they are prompted to consider the stereotype that "women are not good at math" prior to taking the test. Two recent ethnographic studies highlight how minority students who are voluntarily bussed to majority-white suburban schools must constantly navigate stereotypes about their racial/ethnic backgrounds, leading some of them to question their own abilities and to only maintain co-racial friendships (Holland 2012; Ispa-Landa 2013).

Schools with higher concentrations are white and affluent students may also be more competitive schooling environments than high-minority, high-poverty schools.
Although prior research suggests that "academic press" in schools is associated with positive outcomes for students (Lee and Smith 1999), competitive schooling environments may be

harmful for disadvantaged students if they do not feel that they have sufficient resources to compete with their peers (Jencks and Mayer 1990). Portes and Hao (2004) argue that competitive school contexts may be particularly harmful for the Mexican origin children of immigrants.

Several prior studies show that the children of Mexican immigrants and Latino/a students perform worse educationally as they gain exposure to socioeconomically advantaged youth in schools. Portes and Hao (2004) show that second-generation Mexican origin youth in the CILS have a greater risk of dropping out of school as the average SES levels of peers in their schools increases, net of background predictors of dropout. Also using the CILS, Portes and MacLeod (1996) also show that the positive relationship between immigrant parental socioeconomic status and math achievement is steeper in higher SES versus lower SES schools. Their results imply that socioeconomically disadvantaged children of immigrants in low-SES schools should perform better academically than comparable peers in middle- or high-SES schools.

Crosnoe (2009) also finds that low-income Latinos are less likely to take rigorous upper-level science courses in middle-income versus low-income schools. He shows that low-income Latino adolescents in higher income schools are more likely to express feelings of social isolation and depression, suggesting that heightened socioeconomic differences between low-income Latino/a youth and their peers may lead the former to be more psychologically detached from school.

Mexican origin youth may also feel a greater sense of social support and camaraderie in schools with higher concentrations of co-ethnic Latino/a students (Portes and Hao 2004). A number of studies show that increasing Latino/a exposure to fellow co-ethnic Latino/as is

associated with positive educational achievements outcomes in both elementary school (Lee and Klugman 2013) and adolescence (Goldsmith 2003; Potochnick and Handa Forthcoming).

Potochnick and Handa (Forthcoming) refer to this outcome as a "Latino paradox," because racial/ethnic isolation in schools has a beneficial rather than a harmful effect on the educational outcomes of Latino/a youth. However, they argue that targeted institutional supports, rather than a heightened sense of social belonging or camaraderie, accounts for the observed Latino/a paradox. Using NELS:88, they find that "Latino paradox" is partially explained by the fact that schools with high concentrations of Latino/a students effectively administer targeted resources—such as ESL certified teachers and language minority coursework—to Latino/a students.

Selection Into Schools and Offsetting School Compositional Influences

Despite the aforementioned theoretical arguments about the relationship between school composition and Mexican origin student outcomes, it is possible that the composition of peers in schools is unrelated to Mexican origin dropout patterns. Mexican origin students are not sorted randomly across schools. Any observed association between school composition and dropout could be solely due to mechanisms of selection into schools, rather than to the attributes of schools themselves (Lauen and Gaddis 2013).

The factors that influence student selection into schools are also likely to impact the process of school dropout. For example, household socioeconomic status influences the types of neighborhoods where families lie (Charles 2003) and also shapes the process of school dropout (Rumberger and Lim 2008). Students who live in lower SES neighborhoods and attend lower SES schools may themselves be from impoverished households. In this scenario, the observed

relationship between school SES and dropout is due to household socioeconomic status, rather than the socioeconomic status of the school.

Mexican origin households exhibit a number of characteristics that simultaneously place Mexican origin youth at risk of attending high-minority, high-poverty schools and dropping out of school. Mexican origin adults, the parents of many Mexican origin youth, have low levels of human capital and lower returns to human capital than other immigrant adults (Portes and Rumbaut 2001, 2006). Many Mexican origin youth also lived in "mixed" citizenship status households, where some members of the household are undocumented (Passel et al. 2012). These factors are likely to shape both the types of schools that Mexican origin youth attend and the risk of school dropout.

It is also possible that school compositional characteristics may influence Mexican origin student dropout patterns in ways that offset one another, so that the net influence of school composition on Mexican origin school dropout is zero (see, for example, Alexander and Eckland 1975; Goldsmith 2011). For instance, lower SES Mexican origin youth in higher SES schools may have access to higher quality teachers than if they attended lower SES schools. However, these students may also feel a greater sense of relative socioeconomic deprivation in schools with higher SES peers. The benefits of having access to higher quality teachers could be offset by the negative psychological impact of socioeconomic deprivation. In the absence of precise measures of teacher quality or relative deprivation, however, it is difficult to detect offsetting school compositional effects.

III. RESEARCH AIMS AND HYPOTHESES

In this chapter, I test two hypotheses regarding the relationship between school composition and dropout among Mexican origin youth. I first test the hypothesis that Mexican origin youth have a lower risk of school dropout as they gain exposure to non-minority and non-poor youth in schools:

Hypothesis 1: The likelihood of dropout among Mexican origin youth will decrease as these students gain exposure to non-minority and non-poor students in schools.

I then evaluate whether the relationship between exposure to non-minority and non-poor students and dropout is greater in magnitude for Mexican origin youth than for their racial/ethnic peers. The segmented assimilation theory (Portes and Rumbaut 2001) and "double disadvantage" framework both argue that Mexican origin youth may be *more vulnerable* to school compositional influences on their educational outcomes than other students. If this argument is valid, then exposure to non-minority and non-poor peers in schools should reduce the risk of dropout among Mexican origin youth to an even greater extent than for other racial/ethnic groups. To assess this possibility, I include cross-level interactions between school compositional characteristics and student race/ethnicity in models predicting school dropout.

Hypothesis 2: Mexican origin youth will be more susceptible to the impact of school compositional characteristics on their educational outcomes than members of other racial/ethnic groups. The association between school compositional characteristics and dropout will be stronger for Mexican origin youth than for members of other racial/ethnic groups.

IV. DATA AND METHODS

Data and Sample

To test these hypotheses, I use the restricted-use Educational Longitudinal Study of 2002 (ELS:2002) from the National Center for Education Statistics (National Center for Education Statistics, Institute of Education Sciences 2015b). The ELS:2002 includes a nationally representative sample of approximately 16,200 students in 750 schools throughout the United States. The ELS:2002 sample was drawn using a two-stage sampling design. Schools were sampled first using a probability proportional to size sampling technique, and approximately 26 students within each school were subsequently sampled via random sampling. In this analysis, I focus only on members of the base-year (BY) and first follow-up (F1) samples in the ELS:2002 dataset.

Because the base-year survey was not administered until students were in the 10th grade in 2002, the sample does not include students who were early dropouts (dropouts before 10th grade in 2002) and/or students who migrated to the United States prior to 10th grade in 2002 but never enrolled in U.S. schools (see Oropesa and Landale 2009). If Mexican origin students who dropped out of school prior to 10th grade in 2002 were more susceptible to school compositional influences on their risk of dropout than those who remained in school through 10th grade in 2002, then my study will underestimate the impact of school racial/ethnic and socioeconomic composition on Mexican origin dropout.[17]

[17] To estimate the degree of potential bias associated with the selective nature of the ELS:2002 sample, I calculated the school attrition rates of Mexican origin students by age. Using the 2001 American Community Survey (ACS) microdata sample (Ruggles et al. 2010), I estimated the proportion of Mexican origin youth that were not enrolled in school prior to age 15 in 2001, the year prior to when the ELS:2002 survey was administered to 10th graders. The percentage of Mexican origin youth that were not enrolled in school in 2001 was 1.2% for 12 year-olds, 2.1% for 13 year-olds, and 1.5% for 14 year-olds, 3.8% for 15 year-olds, 9.0% for 16 year-olds, and 18.8% of 17 year-olds. Thus, fewer than 2.0% of all Mexican origin Latino/a youth are likely excluded from the ELS:2002 sample due to school attrition prior to age 15. Oropesa and Landale (2009) also estimate that approximately 14.2% to 17.5% of foreign-born Mexican origin youth arrive in the United States as labor migrants who never enroll in school. Taking these figures

I restrict the sample to members of the sophomore cohort (10th graders in 2002) who were respondents in both the base-year and the first follow-up survey. In descriptive analyses, I use the base-year to first follow-up sample weight (F1PNLWT), which can be used to compare base-year data with first follow-up data for questionnaire-eligible sophomores in 2002. For multivariate analyses of school dropout, I restrict the sample to members of the sophomore cohort in 2002 who were base-year respondents and who had non-zero base-year to first follow-up sample weights (F1PNLWT). Those with weights of zero on the base-year to first follow-up panel weight (F1PNLWT) were members of the sophomore cohort and participants in the base-year survey that were out of scope or non-respondents in the first follow-up. These restrictions lead to a total sample size of approximately 14,010 students in 750 schools.[18]

Using information on racial and Hispanic/Latino identification, I categorize students in the ELS:2002 sample into six mutually exclusive racial/ethnic groups: Mexican origin Latino (n=1,310 in 340 schools), non-Latino white (n=8,080 students in 680 schools), non-Latino black (n=1,840 students in 440 schools), non-Latino Asian (n=1,280 students in 380 schools), non-Latino other race (n=810 students in 420 schools), and Latino- other (n=690 students in 310 schools). Mexican origin Latinos are students of any race who are identified as "Hispanic-Mexican, Mexican-American, Chicano" on the Hispanic ethnicity variable. The "Non-Latino Other Race" category includes all non-Latino students who are not only white, only black, or only Asian, including American Indians, Alaskan Natives, Pacific Islanders, and multiracial

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into account, I estimate that there are approximately 3.5% of all Mexican origin youth that were not represented by the ELS:2002 sample because they were foreign-born youth that migrated and never enrolled in U.S. schools prior to 10th grade. In sum, the degree of bias in my results due to the selective nature of the ELS:2002 sample is likely minimal.

[18] Cell sizes have been rounded to comply with the restricted-use data regulations set forth by the National Center for Education Statistics, Institute of Education Sciences. Additionally, for the purpose of brevity, the "non-Latino" prefix will be omitted in subsequent discussions of racial/ethnic groups.

youth (whites, blacks, and Asians who also identify as members of another racial group). The "Latino- other" category includes all Latinos of any race who are not of Mexican origin.[19]

Variables

Dependent Variable

The school dropout variable measures whether the student was enrolled in school during the base-year survey in 10th grade in 2002 but was a dropout at the time of the first follow-up survey in 12th grade in 2004 (F1DOSTAT). The reference category includes non-dropouts and alternative completers who earned an early GED. Dropouts do not include students who experienced a dropout spell between 10th and 12th grade if they were enrolled in school at the time of the first follow-up survey in 12th grade.

Independent Variables: School Racial/Ethnic and Socioeconomic Composition

The school-level independent variables of interest are the racial/ethnic and socioeconomic composition of schools attended by students in 10th grade (base-year of the survey). The ELS:2002 dataset includes measures of school compositional characteristics from the Common Core of Data (CCD) that are linked into the student-level ELS:2002 data by NCES. For school racial/ethnic composition, I use the CCD measure of the percent of minority students in the school during the 2001-2002 academic year (CP02PMIN). Because I am interested in determining how exposure to non-minority students impacts school dropout, I subtract the CCD measure of the percent of minority students in the school from 100 to obtain the percent of non-minority students in the school. Minority groups identified include non-Latino blacks, non-Latino Asians and Pacific Islanders, non-Latino American Indians or Alaskan Natives, and

[19] There are significant national origin differences in educational outcomes between Mexican, Cuban, Puerto Rican, and other Latinos (Portes and Rumbaut 2001). Nonetheless, because the ELS:2002 contains a small number of cases representing these national origin subgroups, I categorize the non-Mexican origin groups jointly as members of the "Latino- Other" subgroup.

Latinos of any race. The percent of non-minority students thus largely represents the percentage of non-Latino whites in the school.

In the sample of interest, there are approximately 250 cases that are missing values on the CCD percent non-minority measure (1.8% of cases). For these cases, I impute the value of the CCD percent non-minority measures based on the racial/ethnic characteristics of students in the sample (i.e. "in-sample" characteristics). I assign these students the CCD percent non-minority values (to create the percent same-race/ethnicity measure) of schools that have similar in-sample percentages of non-Latino white students.[20]

To measure school socioeconomic composition, I use in-sample student household socioeconomic characteristics. I create an aggregate school-level measure of socioeconomic status based on in-sample student characteristics using the base-year socioeconomic status index, which is available for all students in the ELS:2002 sample and takes into account parental

[20] For students in schools with missing values for the CCD measure of the percent of non-minority students in the school, I assign the CCD percent non-minority value that corresponds to schools with similar in-sample percentages of non-Latino white students. The "in-sample" or "sample-based" percent white measure refers to the percent of non-Latino white students within each school that is estimated based on the ELS:2002 sample. The base-year ELS:2002 sample includes approximately 26 students sampled randomly from each school, with some students oversampled, such as Asians and Pacific Islanders. For the sample-based school percent non-minority measure, I calculate the approximate percentage of white students in the school by dividing the sum of the number of non-Latino white students (multiplied by their base-year person weights) by the sum of all students in the sample for the school (multiplied by their base-year person weights) and multiplying by 100. I then calculate the school's percentile rank for the percent of white students in the school. I then calculate the mean CCD percent non-minority value for each sample-based percentile rank for schools with non-missing CCD percent non-minority values. I then assign the mean CCD percent non-minority value to schools with missing CCD percent non-minority values, based on the school's percentile rank for the sample-based percent white measure. For instance, for a school that is in the 92nd percentile for percent white based on in-sample characteristics, I assign the mean CCD percent non-minority value that is obtained by taking the mean CCD percent non-minority value for all other schools in the 92nd percentile for the in-sample percent white measure.

education, occupation, and income.[21] The base-year ELS:2002 sample includes approximately 26 students sampled randomly from each school. However, some students were oversampled, such as Asians and Pacific Islanders. The ELS:2002 does not include a within-school sample weight, so there is no way to determine exactly how many students each case in the ELS:2002 represents within his/her school. I use the base-year student weights in the ELS:2002 as an approximation of within-school weights. For each student *i* in school *j*, the average SES of the base-year school is calculated as follows:

$$[(\Sigma\ (=\text{Base-year SES for Student}_{ij})*(\text{Base-Year Weight for Student}_{ij}))/$$

$$\Sigma\ (\text{Base-Year Weight for Student}_{ij})\ ] * 100$$

This measure is then assigned to all students in school *j*.

The pair-wise correlation between the CCD percent non-minority measure and the school mean SES measure is approximately .43 for the total sample of interest. However, the correlation between these two measures differs by student racial/ethnic status. For minorities (all groups except whites), the correlation between percent non-minority and school mean SES is .52. For whites, the correlation between percent non-minority and school mean SES .15, indicating that school racial/ethnic and socioeconomic composition is largely decoupled for white students relative to minority students.

[21] The ELS:2002 data also includes a measure from the CCD of the percent of students in the school who were eligible for free and reduced price lunch (FRPL) in the 2001-2002 academic year. Unfortunately, there are a high number of missing values for this measure in the ELS:2002 dataset (29.4% of cases in the sample of interest with missing values). Additionally, the percent of students who are eligible for FRPL is problematic because it may be a poor measure of socioeconomic status. The measure may contain both "false positives"—students who are not eligible for FRPL but are listed as eligible—and "false negatives"—students who are eligible for FRPL but do not apply (Harwell and LeBeau 2010). Additionally, variables such as parental education and occupation, household composition, and income are more precise measures of socioeconomic status when compared to federal cut-off points for poverty status (Hauser 1994).

I use these continuous measures to create a typology of school racial/ethnic and socioeconomic composition. I divide schools into four categories: Majority Minority/Low SES, Majority White/Low SES, Majority Minority/Middle-High SES, Majority White/Middle-High SES. Majority Minority schools are those that have 50% or more minority students, whereas Majority White schools are those that have 50% or more non-minority students. Low SES schools are schools with a mean school SES value lower than zero—the mean school SES value for the student population in ELS:2002. In other words, Low SES schools have below average mean school SES values. Middle-High SES schools have mean school SES values that are higher than zero. In future work, I will test the sensitivity of my results to these categorical specifications.

Independent Variables: Individual- and Household-Level Controls

Students whose background characteristics place them at a greater risk of dropout are not sorted equally across schools. The relationship between school composition and dropout may be confounded by mechanisms of student selection into school. For this reason, I adjust for several individual- and household-level factors that have been shown to be predictive of school dropout.

Previous studies indicate that the risk of school attrition among Latino/a and Mexican origin youth declines with duration of residence (for the foreign born) and individual and parental nativity (Hirschman 2001; Landale et al. 1998). I create a measure of immigrant generational status using information on student nativity, parental nativity, and age of arrival (student age minus the number of years ago that the student came to the U.S., as reported by the parent who answered the base-year parent survey). Following Rumbaut (2004), I classify students as members of the 1st/Foreign-born (FB) "Other" generation, the 1.75 generation, the 2nd/2.5 generation, and the 3rd and higher generation. The "1st/FB Other" group includes students

who are foreign born who arrived in the U.S. after the age of five and students who are foreign born who are missing information on the number of years ago that they arrived in the country. The 1.75 generation includes foreign-born youth who arrived in the country before the age of five. These students have spent most or all of their school-aged lives in U.S. schools. The 2nd/2.5 generation includes U.S.-born youth who have one or two foreign-born parents. The 3rd and higher generation includes U.S.-born youth with U.S.-born parents. There are approximately 10.9% of all students in the sample of interest who are missing information on student and parental nativity. I classify these students as "missing" on immigrant generational status. In future work, I will use multiple imputation to impute missing values for this variable and for all missing variables in the analysis.

Socioeconomic status is a key determinant of racial/ethnic educational disparities (Kao and Thompson 2003). I control for the socioeconomic status of the household using the base-year socioeconomic composite variable in the ELS:2002. The socioeconomic status composite is a standardized variable (ranging from -2.0 to 2.0 with a mean of zero) that combines equally weighted information from standardized variables measuring father's education, mother's education, family income, father's occupation (Duncan SEI), and mother's occupation (Duncan SEI).

Previous studies show that living in a single-parent family exerts a significant, negative impact on high school completion (Sandefur, McLanahan, and Wojtkiewicz 1992). For this reason, I control for household composition, classifying households as "intact" (both biological or adoptive parents present), "married-stepparent" (one biological/adoptive parent and one stepparent), "mother only" (single mother household), and "other" (all other household compositions).

Finally, I control for academic risk factors among students prior to 10th grade and during 10th grade that could potentially contribute to school dropout by 12th grade. Grade retention and mobility have both been shown to be significant predictors of dropout and high school graduation (Rumberger and Larson 1998; Rumberger and Lim 2008). I control for whether a student repeated a grade one or more times prior to 10th grade, and whether the student changed schools once or two or more times prior to 10th grade (versus no mobility). Poor academic achievement has also been shown to significantly increase the risk of dropout (Rumberger and Lim 2008). I control for students' 10th grade composite (math/reading) standardized test scores as a measure of achievement during the base-year of the study.

In addition to controlling for school composition, I also include controls for two potential confounding school-level factors: School sector and school total enrollment. I include a dummy variable for public school attendance versus private or Catholic school attendance. I also categorize students as attending "low," "middle", or "high" enrollment schools. Low enrollment schools have enrollments that are one standard deviation below the mean (20-390 students), middle enrollment schools have enrollments that between one standard deviation below and above the mean (391-2080 students), and high enrollment schools have enrollments that are one standard deviation above the mean (2,081 or more students).

Analytic Approach

I begin by examining the bivariate associations between school racial/ethnic and socioeconomic composition and dropout among Mexican origin youth in the ELS:2002. I then use multilevel logistic regression models, with students "nested" in schools, to evaluate the associations between school racial/ethnic and socioeconomic composition and the likelihood of school dropout. Multilevel logistic regression models allow me to evaluate the associations

between school compositional characteristics and dropout after adjusting for student and household background factors related to both selection into schools and dropout.

The basic functional form of a multilevel model with both Level 1 (student-level) and Level 2 (school-level) predictors is as follows:

$$\log it(\Pr[nonenroll_i = 1]) = \alpha_{school[j]} + \mathbf{B}_{ij} X_{ij}$$

$$\alpha_{school[j]} \sim N(\gamma_0 + \Gamma_{school} \mathbf{M}_{school}, \sigma^2_{school})$$

In this model, B_{ij} represents the fixed parameter estimates for all student-level background factors that may be correlated with dropout, and $\Gamma_{school[j]}$ represents the fixed parameter estimates for school-level predictors. The multilevel logistic regression models are varying intercept models; they allow the average log-odds of dropout to vary by school, as represented by $\alpha_{school[j]}$. All continuous variables in the multilevel logistic regression models are centered at their means. I also display the Bayesian Information Criterion (BIC) value for all multilevel logistic regression models as a measure of goodness of fit (Hauser 1995; Raftery 1995).

V. RESULTS

Sample Characteristics

Table 3.1 displays the (weighted) means for all variables used in the analysis for the total sample of interest and for the Mexican origin subgroup. As a point of reference, I also include the characteristics of white and black students in the sample. As can be seen in Table 3.1, Mexican origin youth are almost twice as likely to drop out of school than white youth, with a dropout rate of 11.0%. Mexican origin youth have several background characteristics that could

place them at a greater risk of dropout relative to other youth. Approximately 54.6% of Mexican origin youth live in immigrant households—they are foreign born (the 1.75 and 1st/FB Other generations) or they were born in the U.S. but have foreign-born parents (the 2nd/2.5 generation). Mexican origin youth also live in households that have low socioeconomic status levels, even relative to the households where black youth live.

While the majority of Mexican origin youth live in intact households, greater proportions of these youth live in mother only or "other" types of households than whites. Mexican origin youth also exhibit more academic risk factors than white youth, with higher proportions of students that have repeated a grade or changed schools two or more times. Mexican origin youth also have lower average levels of achievement relative to whites in 10th grade, based on base-year composite test scores.

As I showed in Chapter 2 of this analysis, Mexican origin youth attend schools that have high proportions of minority students. On average, Mexican origin students attend schools where 63.9% of their peers are minorities. Mexican origin youth also attend schools with the lowest average levels of peer socioeconomic status relative to both white and black students. Alongside black youth, Mexican origin youth overwhelming attend public schools. Finally, Mexican origin youth are highly concentrated in large/high enrollment schools. Approximately 95.3% of Mexican origin youth attend schools with over 2,100 students enrolled.

School Composition and Mexican Origin Dropout Levels

Table 3.2 includes estimates of overall dropout rates and dropout rates by school racial/ethnic and socioeconomic composition for Mexican origin, white, and black students. Mexican origin youth in the ELS:2002 who were enrolled in school in 10th grade had a greater risk of dropping out of school by 12th grade than both white and black students. Approximately

11.0% of Mexican origin students who were 10th graders in 2002 had dropped out of school by 12th grade. This figure is over double the dropout rate for white youth (4.8%), and is 1.5 percentage points higher than the dropout rate for black youth.

There are notable differences in Mexican origin school dropout rates by both school racial/ethnic and socioeconomic composition. Table 3.2 shows that Mexican origin youth in Majority Minority schools have a dropout rate of 12.4%, which is 4.8 percentage points higher than the dropout rate among those in Majority White schools. Additionally, Mexican origin youth in Low SES schools have a 4.9 percentage point higher rate of dropout than those in Middle/High SES schools.

Mexican origin youth in schools that are both Majority Minority and Low SES have the greatest risk of dropout relative to their peers in all other school types, with a dropout rate of 13.3%. Interestingly, however, those in Majority White/Middle-High SES schools do not have the lowest dropout rates. Rather, those in Majority Minority/Middle-High SES schools have the lowest dropout rates of 5.4%. These results suggest that schools with high concentrations of minorities that are not accompanied by concentrated poverty may be beneficial schooling environments for Mexican origin youth.

The bivariate results show that isolation in high-minority, high-poverty schools is associated with an increased risk of dropout among Mexican origin youth. Conversely, Mexican origin youth that have greater exposure to non-minority and middle/high SES youth have a lower probability of dropout. However, these results do not adjust for individual and background factors related to selection into schools, which could impact both the types of schools that Mexican origin youth attend and their risk of dropout. In the next section, I use multilevel

logistic regression models to evaluate the "net" association between school composition and Mexican origin dropout patterns.

School Racial/Ethnic and Socioeconomic Composition as Predictors of Dropout Among Mexican Origin Youth

I begin the multivariate analysis by evaluating the associations between school compositional characteristics and patterns of school dropout among Mexican origin youth. The purpose of this analysis is to see whether school compositional characteristics account for differences in the likelihood of dropout *within* the Mexican origin population. In this portion of the analysis, I restrict the sample to only Mexican origin youth in the base-year to first follow-up ELS:2002 sample (n=1,310 students in 340 schools).

In Table 3.3, I estimate the odds of dropping out of school among Mexican origin youth in Majority Minority/Low SES schools relative to those in the three other school composition types. The results of the baseline model (Model 1) suggest that exposure to higher SES youth is associated with a reduced risk of dropout among Mexican origin youth, regardless of whether a school is Majority Minority or Majority White. There is not a significant difference in the risk of dropout between Mexican origin youth in Majority White/Low SES schools versus those in Majority Minority/Low SES schools. However, the odds of dropping out of school for Mexican origin youth in Majority Minority/Middle-High SES schools and Majority White/Middle-High SES schools are 81% and 72% lower, respectively, than the odds of dropping out of school for Mexican origin youth in Majority Minority/Low SES schools. In both cases, Mexican origin exposure to higher SES youth is associated with a reduced risk of dropout relative to attending Majority Minority/Low SES schools.

To what extent are these results driven by differences in Mexican origin selection into schools by background characteristics associated with dropout? The results in Model 2 suggest

that differences in nativity and duration of residence do not explain the lower risk of dropout experienced by Mexican origin youth in both Majority Minority and Majority White schools with Middle to High average peer SES levels. Mexican origin youth in these schools have significantly lower odds of dropping out of school relative to those in Majority Minority/Low SES schools even after adjusting for differences in immigrant generational status.

However, adjusting for Mexican origin selection into schools by household socioeconomic status (Model 3) and academic risk factors in 10th grade (Model 4) makes the difference in the odds of dropping out of school non-significant between Mexican origin youth in Majority Minority/Low SES schools and their peers in the two types of higher SES schools (Majority Minority and Majority White). With each 1.0 standard deviation unit increase in household SES, Mexican origin youth have 45% lower odds of dropping out of school (Model 3). Repeating a grade increases the odds of dropout by 99.3%, whereas a 1.0 unit increases in the base-year composite test score in 10th grade lowers the odds of dropping out of school by 6.8% (Model 4). Taking these factors into account eliminates the significance of the dropout advantage exhibited by Mexican origin youth in Majority White/Middle-High SES schools as well as those in Majority Minority/Middle-High SES schools relative to those in Majority Minority/Low SES schools.

In sum, there is little evidence that the observed lower risk of dropout exhibited by Mexican origin youth in higher SES schools—both Majority Minority and Majority White schools—can be attributed to the composition of schools. Rather, the observed dropout advantage among students in higher SES schools relative to those in Majority Minority/Low SES schools is due to the fact that Mexican origin youth with greater household socioeconomic resources select into higher SES schools. Additionally, Mexican origin youth with greater risk

factors for dropout, including those that have repeated a grade and those with lower baseline achievement scores in 10th grade, are likely more isolated in Majority Minority/Low SES schools.

The results of the models in Table 3.3 may be sensitive to the cut-off points used to create the school composition typology. For this reason, I re-estimate the models in Table 3.3, but incorporate continuous measures of the percent of non-minority students in the school, the mean SES level of the school, and an interaction between the two measures. To investigate potential non-linear relationships between school compositional characteristics and Mexican origin dropout, I also estimated models that incorporated squared terms for the continuous measures of the percent of non-minority students and mean school SES levels. However, the squared terms for these variables were non-significant, and I thus do not display the results of those models.

The results of the models estimated using continuous school compositional variables as predictors of Mexican origin dropout are displayed in Table 3.4. The substantive results in Table 3.4 largely reflect those that are found in Table 3.3. In baseline models (Models 1 and 4), exposure to non-minority and higher SES students is associated with a reduced risk of dropout among Mexican origin youth. With a 1.0 percentage point increase in the percentage of non-minority students in the school, the odds of dropout among Mexican origin youth are reduced slightly, by 1.2% (Model 1). A 1.0 standard deviation unit increase in the mean SES level of peers in the school also decreases the odds of dropout among Mexican origin youth by 76.5% (Model 4). However, both of these associations become non-significant when individual- and household-level control variables are held constant (Models 2 and 5).

Similar to the results in Table 3.3, student selection into schools by household SES and differences in academic risk factors in 10th grade appear to account for the negative association

between exposure to non-minority and higher SES youth and dropout among Mexican origin students. Mexican origin youth with greater household socioeconomic resources and fewer academic risk factors in 10th grade attend schools with higher levels of non-minority and non-poor students. These factors, rather than school composition itself, explain the lower risk of dropout exhibited by Mexican origin youth in schools with greater exposure to white and higher SES peers.

In Models 7-9, I do not find that there is a significant interactive effect of school racial/ethnic composition and school SES on Mexican origin dropout. The risk of dropout among Mexican origin youth is not significantly affected by the combination of exposure to non-minority and higher SES youth. This finding runs contrary to the notion that exposure to white *and* affluent students is associated with a decreased risk of dropout among Mexican origin students.

Are Mexican Origin Youth More Vulnerable To School Compositional Influences on Their Risk of Dropout?

In the final portion of the analysis, I determine whether the relationship between school racial/ethnic and socioeconomic composition and dropout differs for Mexican origin youth compared to their racial/ethnic peers. A discussed, scholars have argued that Mexican origin youth may be more susceptible to school compositional effects than other students because of their disadvantaged societal position (Crosnoe 2005) or because their families and co-ethnic communities cannot shield them the adverse effects high-poverty, high-minority schooling contexts on their educational outcomes (Portes and Rumbaut 2001).

I test the premise that Mexican origin youth are more susceptible to school compositional influences on their risk of dropout by analyzing the total base-year to first follow-up ELS:2002 sample. I estimate multilevel logistic regression models with dropout as the dependent variable,

and I include an interaction between student race/ethnicity and school compositional characteristics. For this analysis, I use the continuous school compositional measures that are found in Table 3.4. In Table 3.5, the odds ratios for the school compositional variables now represent the odds of dropping out of school for Mexican origin youth with increased exposure to non-minority and higher SES youth. The interaction terms indicate whether these relationships differ for other racial/ethnic groups relative to Mexican origin youth.

Based on the results in Table 3.5, there is little evidence to support the claim that Mexican origin youth are more susceptible to school compositional influences on their risk of dropout than other students. None of the interaction terms for school compositional variables by student race/ethnicity are significant in Table 3.5. Mexican origin youth do not appear to be more vulnerable to the potentially negative impact of high-minority, high-poverty schooling contexts on their risk of dropout relative to their peers.

VI. CONCLUSION

The educational and socioeconomic patterns of the Mexican origin population have generated considerable debate among scholars studying patterns of immigrant assimilation. The segmented assimilation framework has suggested that contextual factors may create differentiate pathways of assimilation among immigrant origin youth, including a pathway of "downward assimilation" among Mexican origin youth (Portes and Rumbaut 2001; Portes and Zhou 1993; Zhou 1997a, 1997b). My research has sought to contribute to this debate by evaluating how school racial/ethnic and socioeconomic composition shapes a critical outcome in the educational attainment process for Mexican origin youth—the decision to drop out or persist in high school.

Mexican origin youth have the highest dropout rates of any racial/ethnic student group in the ELS:2002. Theories of educational stratification, neighborhood effects, and immigrant incorporation suggest that Mexican origin isolation in high-minority, high-poverty schools could exacerbate the risk of dropout among Mexican origin adolescents, above and beyond factors associated with disadvantaged social origins. However, my analysis largely demonstrates that the racial/ethnic and socioeconomic composition of peers in high school is not to blame for patterns of dropout among Mexican origin youth.

The observed risk of school dropout is lower among Mexican origin youth who have greater exposure to non-minority and non-poor youth. To be sure, Mexican origin youth in Majority Minority/ Low SES schools have the highest probability of dropout relative to their Mexican origin peers in other types of schools. However, school composition is not the source of these differential dropout patterns. Mexican origin youth who have background characteristics that place them at a lower risk of dropout—those with greater household socioeconomic resources and those with lower levels of academic risk for dropout in 10th grade—attend schools with higher proportions of non-minority and non-poor students. Thus, the observed negative relationship between exposure to non-minority and middle/high SES students and dropout among Mexican origin youth is due to mechanisms of student selection into schools. This finding is similar to other studies that show that school compositional influences on student outcomes are largely due to processes of selection into schools (Lauen and Gaddis 2013)

I do not find evidence that Mexican origin youth are more susceptible to school compositional influences on their risk of dropout than members of other racial/ethnic groups. The relationship between school composition and dropout does not differ for Mexican origin youth relative to members of other racial/ethnic groups.

These findings raise questions about the applicability of the segmented assimilation (Portes and Rumbaut 2001) and "double disadvantage" (Crosnoe 2005) scenarios for explaining educational disadvantages among Mexican origin youth. The two key premises of these frameworks—the negative impacts of high-minority, high-poverty schools on the educational outcomes of Mexican origin youth and the particular vulnerability of Mexican origin youth to school compositional influences—are not supported by the evidence in this analysis.

Furthermore, my analysis refutes the arguments that isolation with co-ethnic Latino/as is beneficial, and exposure to white and affluent students harmful, for Mexican origin youth. In other words, there is no evidence of a net "Latino segregation paradox" (Potochnick and Handa Forthcoming) for Mexican origin dropout, nor is there support for the claim that Mexican origin youth are negatively impacted by exposure to white and affluent students because of factors such as competition, relative deprivation, cultural conflict, or stereotype threat.

These results highlight the salience of social origins and prior educational pathways as a key set of factors explaining dropout patterns among Mexican origin youth. My findings are aligned with sociological frameworks that highlight how differences in social origins stratify students within the education system, such as the status attainment model (Haller and Portes 1973; Sewell, Haller, and Ohlendorf 1970; Sewell, Haller, and Portes 1969) and Lareau's cultural capital model (Lareau 2011). Mexican origin youth are being incorporated into an education system where achievement patterns are increasingly bifurcated by socioeconomic status (Reardon 2011). In this context, disadvantaged social origins impacts both the types of schools that Mexican origin youth attend and their risk of dropout.

While these results provide little evidence of school compositional effects on Mexican origin dropout patterns, there are still reasons to believe that racial/ethnic and socioeconomic

isolation in schools can have a negative on impact Mexican origin student educational outcomes. Low academic achievement in 10th grade is a major determinant of dropout among Mexican origin youth by 12th grade. It is possible that racial/ethnic and socioeconomic isolation in schools during elementary school influences Mexican origin dropout in high school by depressing achievement levels prior to high school. In fact, prior research shows that isolation in high-minority schools is associated with lower math achievement among elementary school students in the ECLS-K. In other words, racial/ethnic and socioeconomic isolation in early childhood may indirectly affect Mexican origin dropout in high school by lowering early academic achievement levels.

Additionally, I have only examined one educational attainment outcome in this analysis—school dropout. It is possible that school composition impacts other educational outcomes among Mexican origin high school students, such as achievement (see Goldsmith 2003; Potochnick and Handa Forthcoming; Ryabov and Van Hook 2007) or college preparation (see Crosnoe 2009).

While this work provides greater insight into the relationship between school composition and Mexican origin student outcomes, the analysis has several limitations that must be acknowledged. While the ELS:2002 offers a comprehensive set of measures to investigate the relationship between school composition and dropout, it has some drawbacks for studying the Mexican origin population as an immigrant subgroup. The Mexican origin population in the ELS:2002 is only identified through student and parent survey questions regarding racial and ethnic identification. There is no measure of student birthplace or parental birthplace. The estimates of Mexican origin dropout rates may be upwardly biased if Mexican-born and

Mexican-descent students who stay enrolled in school do not identify as Latino/as of Mexican origin (Duncan and Trejo 2007).

This analysis also focuses on dropout among Mexican origin youth between 10th and 12th grade. The sample does not include Mexican origin students that drop out of school before 10th grade or Mexican origin youth who are newer foreign-born arrivals who never enroll in U.S. schools (Oropesa and Landale 2009). If these youth are more susceptible to school compositional influences on their educational outcomes, then my analysis will underestimate the impact of school racial/ethnic and socioeconomic composition on Mexican origin dropout. However, I argue that the degree of bias presented by the absence of these students is likely minimal, given low percentages of Mexican origin youth that are not enrolled in school prior to age 15 and the relatively small numbers of Mexican origin youth that never enroll in schools that would be present in the sample had they enrolled in school and persisted through 10th grade.

I have largely demonstrated that high-minority, high-poverty schooling contexts are not key determinants of Mexican origin dropout patterns. However, this finding does not imply that "separate" means "equal" for Mexican origin youth in U.S. schools. Mexican origin isolation in high-minority, high-poverty schooling contexts is indicative of broader patterns of inequality of educational opportunity for minority students in U.S. schools. While school isolation is not connected to school dropout, it may still have negative long-term consequences for Mexican origin adult socioeconomic outcomes and intergroup relations.

Table 3.1. Sample Characteristics for Analysis of School Dropout, ELS:2002 Base-year to First Follow-Up Sample (Weighted)

	All Students		Mexican Origin		Non-Latino White		Non-Latino Black	
Variable	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Dropout	0.063	0.003	0.110	0.012	0.048	0.003	0.095	0.009
Race/Ethnicity								
Mexican Origin	0.105	0.008	1.000		n.a.		n.a.	
NL White	0.622	0.010	n.a.		1.000		n.a.	
NL Black	0.137	0.007	n.a.		n.a.		1.000	
NL Asian	0.037	0.003	n.a.		n.a.		n.a.	
NL Other Race	0.053	0.003	n.a.		n.a.		n.a.	
Latino- Other	0.046	0.003	n.a.		n.a.		n.a.	
Sex								
Male	0.503	0.005	0.468	0.015	0.502	0.007	0.516	0.013
Immigrant Generation								
3rd and Higher	0.712	0.007	0.321	0.022	0.837	0.006	0.742	0.014
2nd/2.5	0.109	0.004	0.354	0.020	0.045	0.003	0.062	0.008
1.75	0.025	0.002	0.077	0.009	0.009	0.002	0.012	0.002
1st/FB other	0.042	0.003	0.133	0.013	0.011	0.002	0.028	0.005
Missing	0.109	0.004	0.110	0.011	0.095	0.005	0.152	0.010
Socioeconomic Status								
Socioeconomic Status (index)	0.005	0.015	-0.546	0.034	0.175	0.015	-0.248	0.020
Household Composition								
Intact	0.579	0.006	0.592	0.017	0.642	0.008	0.323	0.013
Married- Stepparent	0.163	0.004	0.151	0.012	0.158	0.006	0.176	0.011
Mother Only	0.187	0.005	0.175	0.014	0.142	0.005	0.396	0.014
Other	0.072	0.003	0.082	0.009	0.058	0.004	0.106	0.008

Table 3.1. (Cont'd.)

	All Students		Mexican Origin		Non-Latino White		Non-Latino Black	
Variable	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Academic Risk Factors								
Repeated a grade (K-10)	0.168	0.005	0.129	0.011	0.083	0.004	0.162	0.010
Missing- repeated a grade	0.102	0.004	0.150	0.014	0.139	0.006	0.264	0.013
Changed schools once (K-10)	0.191	0.004	0.209	0.013	0.202	0.006	0.150	0.010
Changed schools two or more times (K-10)	0.260	0.005	0.314	0.014	0.237	0.006	0.283	0.012
Missing- Changed Schools	0.171	0.005	0.150	0.013	0.141	0.006	0.274	0.013
Base-year composite (math/reading) test score	50.4	0.2	44.5	0.4	53.1	0.2	44.0	0.3
School Characteristics								
Non-minority students (%)	66.5	1.0	36.1	2.3	81.1	0.6	37.7	1.8
Average School SES	-0.003	0.014	-0.317	0.037	0.090	0.014	-0.163	0.019
Public School (vs. Catholic or Private)	0.925	0.003	0.967	0.006	0.907	0.005	0.971	0.004
Total Enrollment (Low)	0.098	n.a.a	0.047	n.a.	0.125	n.a.	0.043	n.a.
Total Enrollment (Middle)	0.712	n.a.	0.468	n.a.	0.749	n.a.	0.794	n.a.
Total Enrollment (High)	0.190	n.a.	0.485	n.a.	0.126	n.a.	0.163	n.a.
Total Enrollment- Missing	0.002	n.a.	0.001	n.a.	0.001	n.a.	0.010	n.a.
n	14,010		1,310		8,080		1,840	
No. Schools	750		340		680		440	

[a]Standard errors could not be calculated for the enrollment variables because some strata only included one sampling unit.

Table 3.2. Dropout (Percent) by Race/Ethnicity and School Compositional Characteristics, Base-Year to First Follow-Up ELS:2002

	Mexican Origin			White			Black		
	Mean	Std. Error	n	Mean	Std. Error	n	Mean	Std. Error	n
Overall	11.0%	1.2%	1,310	4.8%	0.3%	8,080	9.5%	0.9%	1,840
School Race/Ethnicity									
Majority Minority	12.4%	1.4%	870	9.3%	1.8%	630	9.7%	1.2%	1,100
Majority White	7.6%	2.0%	440	4.4%	0.3%	7,450	9.0%	1.4%	740
School SES[a]									
Low Mean SES	12.1%	1.3%	960	6.8%	0.6%	3,430	10.6%	1.1%	1,260
Middle/High SES	7.1%	2.5%	350	3.1%	0.4%	4,660	6.5%	1.4%	570
School Race/Ethnicity X School SES									
Majority Minority- Low SES	13.3%	1.5%	750	11.4%	2.2%	430	10.4%	1.3%	920
Majority White- Low SES	7.3%	2.1%	210	6.1%	0.6%	3,000	11.1%	2.1%	340
Majority Minority- Middle/High SES	5.4%	2.8%	120	4.2%	2.0%	200	6.3%	2.2%	170
Majority White- Middle/High SES	7.9%	3.4%	230	3.0%	0.4%	4,450	6.6%	1.9%	400

[a]Low mean SES schools are those that have a mean SES value lower than 0.0, the mean for the ELS:2002 population. Middle/High SES schools have a value of 0.0 or higher.

Table 3.3. School Compositional Characteristics (Typology) as Predictors of Dropout among Mexican Origin Youth, Base-Year to First Follow-Up ELS:2002

	Model 1 (Baseline)				Model 2 (Immigrant Gen. Controls)				Model 3 (HH Controls)			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Composition Typology												
Majority White, Low SES	0.643	0.211	0.178		0.689	0.229	0.261		0.702	0.236	0.293	
Majority Minority, Middle/High SES	0.190	0.125	0.012	*	0.201	0.132	0.015	*	0.302	0.203	0.074	
Majority White, Middle/High SES	0.280	0.114	0.002	**	0.323	0.134	0.006	**	0.486	0.209	0.094	
(Ref. Majority Minority, Low SES)												
Controls:												
Female					0.707	CI	0.109		0.696	0.153	0.099	
(Ref. Male)												
Immigrant Generational Status												
2nd/2.5 Generation					1.216	0.357	0.507		1.079	0.338	0.809	
1.75 Generation					0.938	0.461	0.896		0.806	0.410	0.671	
1st/FB Other Generation					1.723	0.595	0.115		1.294	0.476	0.484	
Missing Gen. Status					2.481	0.826	0.006	**	2.341	0.798	0.013	*
(Ref. 3rd + Generation)												
Household SES												
Base-year SES index									0.547	0.112	0.003	**
Family Composition												
Stepparent									1.219	0.404	0.550	
Mother Only									2.103	0.568	0.006	**
Other Family									1.304	0.489	0.479	
(Ref. Intact)												
Academic Risk Factors												
Repeated a grade												
Repeated a grade- Missing												
(Ref. Never repeated a grade)												
Changed Schools- 1 time												
Changed Schools- 2 or more times												
Changed Schools- Missing												
(Ref. Never changed schools.)												
Base-year Test Score (Composite)												
School Characteristics												
Public												
(Ref. Catholic and Other Private)												
High Enrollment												
(Ref. Low and Medium Enrollment)												
Constant	0.103	0.018	0.000	***	0.089	0.026	0.000	***	0.068	0.022	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.487				0.465				0.474			
BIC	744				768				779			
n	1,310				1,310				1,310			

*p<.05, **p<.01, ***p<.001

Table 3.3. (Cont'd.)

	Model 4 (Academic Risk Controls)				Model 5 (School Controls)			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Composition Typology								
Majority White, Low SES	0.747	0.254	0.391		0.796	0.275	0.508	
Majority Minority, Middle/High SES	0.343	0.234	0.117		0.474	0.334	0.289	
Majority White, Middle/High SES	0.696	0.306	0.410		0.866	0.386	0.746	
(Ref. Majority Minority, Low SES)								
Controls:								
Female	0.751	0.168	0.200		0.744	0.166	0.185	
(Ref. Male)								
Immigrant Generational Status								
2nd/2.5 Generation	1.049	0.339	0.883		1.009	0.331	0.979	
1.75 Generation	0.834	0.430	0.725		0.804	0.416	0.673	
1st/FB Other Generation	0.991	0.379	0.981		0.969	0.370	0.935	
Missing Gen. Status	3.791	2.649	0.057		3.744	2.600	0.057	
(Ref. 3rd + Generation)								
Household SES								
Base-year SES index	0.659	0.138	0.046	*	0.671	0.141	0.057	
Family Composition								
Stepparent	1.141	0.389	0.699		1.126	0.384	0.728	
Mother Only	2.009	0.564	0.013	*	1.986	0.557	0.014	*
Other Family	1.297	0.494	0.495		1.317	0.504	0.471	
(Ref. Intact)								
Academic Risk Factors								
Repeated a grade	1.993	0.575	0.017	*	2.003	0.580	0.016	*
Repeated a grade- Missing	0.651	0.646	0.665		0.661	0.656	0.677	
(Ref. Never repeated a grade)								
Changed Schools- 1 time	0.972	0.321	0.932		0.965	0.319	0.915	
Changed Schools- 2 or more times	0.925	0.273	0.791		0.921	0.271	0.780	
Changed Schools- Missing	0.877	0.804	0.886		0.857	0.789	0.867	
(Ref. Never changed schools.)								
Base-year Test Score (Composite)	0.932	0.014	0.000	***	0.935	0.014	0.000	***
School Characteristics								
Public					4.410	4.740	0.167	
(Ref. Catholic and Other Private)								
High Enrollment					1.267	0.338	0.375	
(Ref. Low and Medium Enrollment)								
Constant	1.242	0.912	0.768		0.239	0.314	0.276	
Random Effects	Est.				Est.			
Intercept (School)	0.424				0.403			
BIC	786				796			
n	1,310				1,310			

*p<.05, **p<.01, ***p<.001

Table 3.4. School Compositional Measures (Continuous) as Predictors of Dropout among Mexican Origin Youth, Base-Year to First Follow-Up ELS:2002

	School Racial/Ethnic Composition Models											
	Model 1 (Baseline)				Model 2 (Ind. And HH Controls)				Model 3 (School Controls)			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Measures												
School Non-Minority (%)	0.988	0.004	0.009	**	0.997	0.005	0.480		1.002	0.006	0.679	
School Mean SES									0.527	0.255	0.186	
School Non-Minority X Mean SES												
Controls:												
Female					0.768	0.172	0.238		0.738	0.165	0.174	
(Ref. Male)												
Immigrant Generational Status												
2nd/2.5 Generation					1.078	0.347	0.817		1.034	0.338	0.920	
1.75 Generation					0.828	0.427	0.714		0.825	0.426	0.710	
1st/FB Other Generation					0.997	0.382	0.995		1.009	0.386	0.981	
Missing Gen. Status					3.938	2.753	0.050	*	3.856	2.676	0.052	
(Ref. 3rd + Generation)												
Household Characteristics												
Base-year SES index					0.617	0.124	0.016	*	0.710	0.152	0.108	
Stepparent					1.125	0.383	0.729		1.103	0.375	0.774	
Mother Only					2.012	0.564	0.013	*	2.038	0.571	0.011	*
Other Family					1.312	0.499	0.476		1.315	0.504	0.474	
(Ref. Intact)												
Academic Risk Factors												
Repeated a grade					1.885	0.540	0.027	*	1.966	0.566	0.019	*
Repeated a grade- Missing					0.647	0.648	0.664		0.614	0.617	0.627	
(Ref. Never repeated a grade)												
Changed Schools- 1 time					0.990	0.326	0.977		0.986	0.325	0.965	
Changed Schools- 2 or more times					0.962	0.282	0.895		0.946	0.278	0.850	
Changed Schools- Missing					0.880	0.812	0.890		0.923	0.863	0.932	
(Ref. Never changed schools.)												
Base-year Test Score (Composite)					0.930	0.014	0.000	***	0.936	0.014	0.000	***
School Characteristics												
Public									4.056	4.351	0.192	
(Ref. Catholic and Other Private)												
High Enrollment									1.288	0.347	0.347	
(Ref. Low and Medium Enrollment)												
Constant	0.069	0.011	0.000	***	1.097	0.804	0.899		0.206	0.267	0.223	
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.569				0.415				0.401			
BIC	741				774				788			
n	1,310				1,310				1,310			

*p<.05, **p<.01, ***p<.001

Table 3.4. (Cont'd.)

	School SES Models											
	Model 4 (Baseline)				Model 5 (Ind. And HH Controls)				Model 6 (School Controls)			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Measures												
School Non-Minority (%)									1.002	0.006	0.679	
School Mean SES	0.236	0.080	0.000	***	0.471	0.181	0.050		0.527	0.255	0.186	
School Non-Minority X Mean SES												
Controls:												
Female					0.748	0.167	0.194		0.738	0.165	0.174	
(Ref. Male)												
Immigrant Generational Status												
2nd/2.5 Generation					1.058	0.340	0.860		1.034	0.338	0.920	
1.75 Generation					0.844	0.434	0.742		0.825	0.426	0.710	
1st/FB Other Generation					1.014	0.385	0.971		1.009	0.386	0.981	
Missing Gen. Status					3.825	2.661	0.054		3.856	2.676	0.052	
(Ref. 3rd + Generation)												
Household Characteristics												
Base-year SES index					0.696	0.148	0.088		0.710	0.152	0.108	
Stepparent					1.104	0.376	0.772		1.103	0.375	0.774	
Mother Only					2.063	0.578	0.010	**	2.038	0.571	0.011	*
Other Family					1.276	0.487	0.522		1.315	0.504	0.474	
(Ref. Intact)												
Academic Risk Factors												
Repeated a grade					1.944	0.559	0.021	*	1.966	0.566	0.019	*
Repeated a grade- Missing					0.601	0.604	0.612		0.614	0.617	0.627	
(Ref. Never repeated a grade)												
Changed Schools- 1 time					1.003	0.330	0.993		0.986	0.325	0.965	
Changed Schools- 2 or more times					0.961	0.282	0.893		0.946	0.278	0.850	
Changed Schools- Missing					0.961	0.892	0.966		0.923	0.863	0.932	
(Ref. Never changed schools.)												
Base-year Test Score (Composite)					0.934	0.014	0.000	***	0.936	0.014	0.000	***
School Characteristics												
Public									4.056	4.351	0.192	
(Ref. Catholic and Other Private)												
High Enrollment									1.288	0.347	0.347	
(Ref. Low and Medium Enrollment)												
Constant	0.066	0.011	0.000	***	0.919	0.679	0.909		0.206	0.267	0.223	
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.464				0.419				0.401			
BIC	727				771				788			
n	1,310				1,310				1,310			

*p<.05, **p<.01, ***p<.001

Table 3.4. (Cont'd.)

	School Racial/Ethnic Compositon X School SES Models											
	Model 7 (Baseline)				Model 8 (Ind. And HH Controls)				Model 9 (School Controls)			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Measures												
School Non-Minority (%)	1.000	0.005	0.968		1.003	0.006	0.638		1.002	0.006	0.668	
School Mean SES	0.233	0.096	0.000	***	0.421	0.194	0.060		0.528	0.256	0.188	
School Non-Minority X Mean SES	0.997	0.012	0.805		1.001	0.013	0.912		1.002	0.014	0.872	
Controls:												
Female					0.746	0.167	0.191		0.737	0.165	0.173	
(Ref. Male)												
Immigrant Generational Status												
2nd/2.5 Generation					1.075	0.347	0.823		1.032	0.338	0.923	
1.75 Generation					0.861	0.444	0.771		0.825	0.427	0.710	
1st/FB Other Generation					1.038	0.398	0.922		1.009	0.386	0.982	
Missing Gen. Status					3.932	2.747	0.050	*	3.855	2.675	0.052	
(Ref. 3rd + Generation)												
Household Characteristics												
Base-year SES index					0.704	0.151	0.102		0.709	0.151	0.107	
Stepparent					1.097	0.374	0.785		1.102	0.375	0.775	
Mother Only					2.074	0.582	0.009	**	2.038	0.571	0.011	*
Other Family					1.278	0.489	0.521		1.311	0.503	0.480	
(Ref. Intact)												
Academic Risk Factors												
Repeated a grade					1.953	0.562	0.020	*	1.968	0.567	0.019	*
Repeated a grade- Missing					0.592	0.596	0.603		0.612	0.615	0.625	
(Ref. Never repeated a grade)												
Changed Schools- 1 time					0.996	0.329	0.990		0.986	0.326	0.966	
Changed Schools- 2 or more times					0.956	0.281	0.879		0.947	0.278	0.853	
Changed Schools- Missing					0.963	0.896	0.967		0.926	0.864	0.934	
(Ref. Never changed schools.)												
Base-year Test Score (Composite)					0.933	0.014	0.000	***	0.936	0.014	0.000	***
School Characteristics												
Public									4.086	4.386	0.190	
(Ref. Catholic and Other Private)												
High Enrollment									1.286	0.347	0.351	
(Ref. Low and Medium Enrollment)												
Constant	0.067	0.012	0.000	***	0.913	0.678	0.902		0.203	0.263	0.219	
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.459				0.425				0.404			
BIC	741				785				795			
n	1,310				1,310				1,310			

*p<.05, **p<.01, ***p<.001

Table 3.5. Predictors of Dropout, Cross-level Interactions Between School Composition and Student Race/Ethnicity, Base-Year to First Follow-Up ELS:2002

	Model 1				Model 2			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Composition								
School Non-Minority % (x Mexican Origin)	0.989	0.004	0.008	**	0.999	0.004	0.846	
School Mean SES (x Mexican Origin)					(Controlled)			
School Non-Minority X Mean SES (x Mexican Origin)								
School Compositon x Student Race/Ethnicity								
School Non-Minority x White	0.999	0.005	0.779		0.995	0.005	0.318	
School Non-Minority x Black	1.004	0.005	0.441		0.999	0.005	0.922	
School Non-Minority x Asian	1.011	0.008	0.200		1.011	0.009	0.190	
School Non-Minority x Other Race	1.009	0.006	0.150		1.001	0.006	0.826	
School Non-Minority x Other Latino	1.008	0.007	0.231		1.009	0.007	0.156	
School Mean SES x White								
School Mean SES x Black								
School Mean SES x Asian								
School Mean SES x Other Race								
School Mean SES x Latino								
School Non-Minority x School Mean SES x White								
School Non-Minority x School Mean SES x Black								
School Non-Minority x School Mean SES x Asian								
School Non-Minority x School Mean SES x Other Race								
School Non-Minority x School Mean SES x Other Latino								
Student Race/Ethnicity								
White	0.584	0.113	0.006	**	1.105	0.230	0.633	
Black	0.973	0.221	0.906		0.878	0.211	0.587	
Asian	0.307	0.093	0.000	***	0.514	0.163	0.035	*
Other Race	0.912	0.220	0.704		1.220	0.307	0.429	
Latino- Other	1.084	0.286	0.759		1.300	0.355	0.337	
(Ref. Mexican Origin)								
Control Variables	No				Yes			
Random Effects	Est.				Est.			
Intercept (School)	0.409				0.100			
BIC	4933				4463			
n	14,010				14,010			

*p<.05, **p<.01, ***p<.001

Table 3.5. (Cont'd.)

	Model 3				Model 4			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Composition								
School Non-Minority % (x Mexican Origin)					(Controlled)			
School Mean SES (x Mexican Origin)	0.244	0.074	0.000	***	0.631	0.215	0.178	
School Non-Minority X Mean SES (x Mexican Origin)								
School Compositon x Student Race/Ethnicity								
School Non-Minority x White								
School Non-Minority x Black								
School Non-Minority x Asian								
School Non-Minority x Other Race								
School Non-Minority x Other Latino								
School Mean SES x White	0.573	0.209	0.126		0.958	0.382	0.914	
School Mean SES x Black	1.165	0.490	0.716		1.245	0.573	0.634	
School Mean SES x Asian	1.352	0.792	0.607		1.671	1.051	0.414	
School Mean SES x Other Race	1.044	0.569	0.937		1.420	0.856	0.561	
School Mean SES x Latino	1.407	0.679	0.479		1.878	1.005	0.239	
School Non-Minority x School Mean SES x White								
School Non-Minority x School Mean SES x Black								
School Non-Minority x School Mean SES x Asian								
School Non-Minority x School Mean SES x Other Race								
School Non-Minority x School Mean SES x Other Latino								
Student Race/Ethnicity								
White	0.574	0.111	0.004	**	1.073	0.239	0.752	
Black	1.112	0.246	0.631		0.958	0.233	0.859	
Asian	0.332	0.098	0.000	***	0.469	0.146	0.015	
Other Race	1.002	0.252	0.992		1.328	0.358	0.294	
Latino- Other	1.219	0.309	0.434		1.219	0.329	0.464	
(Ref. Mexican Origin)								
Control Variables	No				Yes			
Random Effects	Est.				Est.			
Intercept (School)	0.188				0.100			
BIC	4800				4469			
n	14,010				14,010			

*p<.05, **p<.01, ***p<.001

Table 3.5. (Cont'd.)

	Model 5				Model 6		
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value
School Composition							
School Non-Minority % (x Mexican Origin)	0.999	0.006	0.897		1.000	0.007	0.953
School Mean SES (x Mexican Origin)	0.209	0.106	0.002	**	0.591	0.327	0.342
School Non-Minority X Mean SES (x Mexican Origin)	0.995	0.011	0.690		1.000	0.012	0.987
School Compositon x Student Race/Ethnicity							
School Non-Minority x White	0.993	0.007	0.352		0.993	0.008	0.353
School Non-Minority x Black	0.997	0.008	0.737		0.996	0.008	0.638
School Non-Minority x Asian	1.008	0.011	0.456		1.007	0.012	0.574
School Non-Minority x Other Race	1.001	0.009	0.898		0.996	0.009	0.655
School Non-Minority x Other Latino	1.007	0.010	0.459		1.011	0.010	0.292
School Mean SES x White	0.793	0.435	0.672		1.127	0.672	0.841
School Mean SES x Black	0.928	0.619	0.911		1.157	0.848	0.842
School Mean SES x Asian	0.896	0.734	0.893		0.988	0.875	0.989
School Mean SES x Other Race	1.014	0.719	0.984		1.275	0.999	0.757
School Mean SES x Latino	1.066	0.800	0.932		1.652	1.335	0.535
School Non-Minority x School Mean SES x White	0.993	0.014	0.642		0.996	0.015	0.779
School Non-Minority x School Mean SES x Black	0.989	0.015	0.487		0.994	0.016	0.714
School Non-Minority x School Mean SES x Asian	0.988	0.023	0.614		0.986	0.025	0.569
School Non-Minority x School Mean SES x Other Race	0.992	0.018	0.647		0.985	0.020	0.456
School Non-Minority x School Mean SES x Other Latino	1.000	0.017	0.988		1.012	0.019	0.517
Student Race/Ethnicity							
White	0.651	0.144	0.053		1.142	0.278	0.587
Black	1.092	0.279	0.731		0.907	0.250	0.723
Asian	0.401	0.132	0.005	**	0.549	0.190	0.083
Other Race	1.033	0.280	0.905		1.308	0.378	0.354
Latino- Other	1.372	0.388	0.263		1.327	0.394	0.341
(Ref. Mexican Origin)							
Control Variables	No				Yes		
Random Effects	Est.				Est.		
Intercept (School)	0.183				0.099		
BIC	4904				4565		
n	14,010				14,010		

*p<.05, **p<.01, ***p<.001

CHAPTER 4: ISOLATED BUT ENGAGED? SCHOOL COMPOSITION AND THE SCHOOL ENGAGEMENT PATTERNS OF MEXICAN ORIGIN YOUTH

I. INTRODUCTION

Since the passage of *Brown v. Board of Education*, the integration of students in schools by racial background has been touted as a civil rights imperative. Contemporary education policies have also sought to promote socioeconomic mixing among students as an indirect means to facilitate racial/ethnic school integration (Reardon, Yun, and Kurlaender 2006). A primary justification for racial/ethnic and socioeconomic school integration policies is the assumption that students perform better in schools when they have exposure to students from racial/ethnic and socioeconomic backgrounds that differ from their own. Indeed, the era of *de jure* black-white school desegregation was associated with positive short- and long-term educational, socioeconomic, and interpersonal outcomes for both minority and non-minority youth (Schofield 1991; Wells and Crain 1994).

For Mexican origin youth, however, isolation in high-minority, high-poverty schools may have unanticipated positive consequences for psychosocial outcomes that are predictive of positive educational outcomes. Prior research shows that Latino/as in schools with high concentrations of minority students have higher expectations, aspirations, and concrete attitudes towards teachers and coursework than white students in majority-white schools, even after adjusting for differences in individual and household characteristics and school and neighborhood context (Goldsmith 2004). **T**he children of Mexican immigrants in kindergarten also have higher confounder-adjusted mental health scores than their non-Latino white peers, and

this mental health advantage is even greater as the percentage of students in poverty in their schools increases (Crosnoe 2005).

Additionally, Latino/a students have been shown to exhibit negative psychosocial outcomes when there is a mismatch between their own racial/ethnic or socioeconomic backgrounds and those of their peers in school. For instance, **l**ow-income Latino/a students in schools with "middle" peer socioeconomic status (SES) levels have more negative self-images and higher rates of social isolation than low-income Latino/a students in low-SES schools, even after adjusting for individual and family background confounders (Crosnoe 2009).

In this chapter, I analyze the restricted-use Educational Longitudinal Study of 2002 (ELS:2002) to investigate the relationship between the racial/ethnic and socioeconomic composition of peers in school and levels of school engagement among Mexican origin high school students. I determine whether Mexican origin youth exhibit a "school isolation paradox" for school engagement.[22] Specifically, I evaluate whether Mexican origin adolescent school engagement levels *decrease* as these students gain increasing exposure to non-minority and socioeconomically advantaged students. I focus on four domains of student engagement: Affective engagement (the degree to which the student likes school), coursework engagement (the student works hard for grades, pays attention in class, completes homework, and has not fallen behind in class), coursework preparedness (the student comes to class with materials for learning), and activities engagement (the student participates in school-sponsored activities).

Prior studies show that Mexican origin youth have lower levels of engagement in school relative to their peers. Ream and Rumberger (2008) show that Mexican American students in

[22] The "school isolation paradox" terminology is borrowed from a study that finds that Latino/a achievement improves as the proportion of Latino/a students in a school increases. The authors of this study refer to this situation as a "Latino paradox" (Potochnick and Handa Forthcoming).

NELS:88 are slightly less engaged in school than non-Latino white students, with lower observed levels of homework activities, school preparedness, and participation in athletic and arts extracurricular activities. Similarly, Portes and Rumbaut (2001) show that second-generation Mexican origin youth are less likely to report that they think grades are "very important" than other non-Latino national origin groups in the CILS, and have the lowest levels of homework engagement of any other national origin group.

However, few prior studies have assessed how school racial/ethnic and socioeconomic composition shapes engagement patterns among Mexican origin youth as a subgroup of interest. Research on Latino/a students shows that attachment and engagement among Latino/a students rises with increased exposure to peers of the same-race/ethnicity in the school (Johnson et al. 2001; Ueno 2009). These studies suggest that Mexican origin engagement should decline as Mexican origin youth gain exposure to non-minority students. Work by Crosnoe (2009) also reveals an increased risk of social isolation among low-income Latino/a students with greater exposure to higher income students. His work supports the argument that Mexican origin youth will be less engaged in school with increasing exposure to higher SES students, given that many Mexican origin youth come from low SES households.

II. BACKGROUND

The Relevance of School Engagement for Educational Outcomes

School engagement is a multi-faceted construct that involves affective, cognitive, and behavioral dimensions (Lawson and Lawson 2013). Affective engagement in school is sometimes referred to as school attachment (Johnson et al. 2001; Lawson and Lawson 2013; Ueno 2009). In their review of prior research on student engagement, Lawson and Lawson

(2013) note that affective engagement refers to students' social, emotional, and psychological attachments towards school. Researchers studying engagement focus on both affective engagement related to academic tasks (boredom in class, enjoyment of class, etc.) and social belonging—closeness or identification with peers, teachers, and school in general.

Behavioral engagement refers to students' actions within schools and tasks related to schooling (Lawson and Lawson 2013). Behavioral engagement has been operationalized in a number of different ways in prior research. Measures of behavioral engagement include involvement in homework activities, school preparation, tardiness or skipping school, attentiveness in class, athletic participation, and arts participation (see Johnson et al. 2001; Ream and Rumberger 2008).

Student engagement is a significant predictor of positive educational attainment outcomes. Engagement plays a prominent role in Finn's (1989) model of school withdrawal. Finn argues that emotional and behavioral involvement in school maximizes the likelihood that students will stay enrolled and graduate from high school. Conversely, non-engagement is associated with a recursive "withdrawal cycle," where behavioral non-participation leads to a lack of positive schooling outcomes, which leads to emotional disengagement and further non-participation in school. Several empirical studies find a positive association between student engagement and school persistence (Archambault et al. 2009; Finn and Rock 1997; Finn and Zimmer 2012).

Importantly, Ream and Rumberger (2008) show that engagement in 10th grade, as measured by school preparation and athletic participation, is negatively associated with school dropout by 12th grade among Mexican American youth in NELS:88, net of background characteristics including socioeconomic status, family structure, and prior school performance.

Ream and Rumberger argue that friendship networks mediate the influence of student engagement on dropout for Mexican origin youth. Mexican American youth who are less engaged in school have a greater number of friends who have dropped out of school. In turn, having more friends who have dropped out of school increases the likelihood that a Mexican origin youth will drop out of school. Ream and Rumberger's work highlights the predictive validity of engagement patterns for later educational attainment outcomes among Mexican American students.

Racial/Ethnic and Socioeconomic Isolation and Student Engagement Patterns

There are several reasons to believe that isolation in high-minority, high-poverty schools will depress levels of student engagement. The institutional resources model of neighborhood and school effects asserts that high-minority, high-poverty neighborhoods and schools have fewer institutional resources to support students, such as high-quality teachers and adequate physical infrastructure (Jencks and Mayer 1990). For example, schools with higher concentrations of poverty and higher proportions of minority students may be unable to attract and retain more experienced teachers (Hanushek et al. 2004). Students may disengage from school if their schools lack institutional resources for engagement. Similarly, a lack of institutional resources may signal to students that their engagement in school is not valued.

In high-minority, high-poverty schools, students may also lack access to peers that exhibit engagement patterns that are associated with positive educational outcomes (Jencks and Mayer 1990). In fact, some researchers have argued that peers in high-minority, high-poverty school settings may promote or reinforce norms that encourage disengagement from school. The oppositional identity hypothesis

(Gibson and Ogbu 1991) and the segmented assimilation theory (Portes and Rumbaut 2001; Portes and Zhou 1993) both assert that peers in high-minority, high-poverty schools may negatively influence minority student engagement patterns by promoting an oppositional stance towards the institution of schooling. These theories argue that oppressed minorities adopt a negative standpoint towards schooling as a means to cope with discrimination. Because they have faced a legacy of discrimination, black and Mexican origin youth are thought to be particularly at risk of adopting an oppositional stance towards schooling through negative peer influences (Gibson and Ogbu 1991; Matute-Bianchi 1986; Ogbu and Matute-Bianchi 1986; Portes and Rumbaut 2001).

In spite of these arguments, a number of scholars have called into question the assumption that anti-school norms and behaviors are widespread among minority students (Ainsworth-Darnell and Downey 1998; Carter 2005; Harris 2011). Indeed, Latino/a students have higher educational aspirations, expectations, and pro-school attitudes than non-Latino white students (Goldsmith 2004; Kao and Tienda 1998). The argument that Mexican origin students disengage in high-minority, high-poverty schools through direct or indirect exposure to anti-school norms and behaviors is tenuous, given that most minority students do not hold oppositional views of schooling. However, even if the oppositional identity hypothesis is not valid, it is possible that attending more integrated schools could increase engagement levels among Mexican origin youth if their peers in school directly encourage engagement in school or if they create an environment that promotes engagement in classroom and school-based activities.

The prior theoretical arguments assume that isolation in high-minority, high-poverty schools will depress student engagement. However, it is possible that racial/ethnic

socioeconomic isolation in schools could have a positive impact—and exposure to non-minority and non-poor students a negative impact—on engagement among minority and disadvantaged youth such as Mexican origin adolescents. Isolation in high-minority, high-poverty schools may facilitate Mexican origin student engagement through an increased sense of social belonging. Conversely, Mexican origin youth may disengage in schooling environments where their racial/ethnic and socioeconomic differences with peers become salient, due to relative deprivation, cultural conflict, negative competition, and/or the enactment of stereotype threat.

Students who attend schools where they are surrounded by peers with similar racial/ethnic and socioeconomic characteristics may feel a greater sense of social belonging than those who have greater exposure to students from different racial/ethnic and socioeconomic backgrounds. Research on social belonging suggests that close student-teacher and student-student relationships are important precursors to student engagement (Juvonen 2006; Osterman 2000). A lack of social connectedness—the reverse of belonging—is also associated with negative outcomes that threaten engagement in school, including poor mental health, physical illness, substance abuse, and behavior problems (Bond et al. 2007; Osterman 2000).

The prior literature does not speak directly to how school compositional characteristics influence social belonging, or whether this relationship varies by student racial/ethnic background. However, organizational aspects of schooling that are related to school composition have been shown to influence students' sense of belonging. For instance, one study finds that competition, differential treatment by teachers, tracking, and ability grouping threaten students' feelings of social belonging (Osterman 2000). Social belonging among minority or socioeconomically disadvantaged students may be threatened in schooling environments with

higher proportions of white and affluent students if these schools are perceived as to be more competitive or are more likely to sort students based on ability.

Segregated school environments could also promote social belonging through homophily in peer networks and the development of same-race/ethnicity friendship ties. Homophily refers to a preference to form ties with individuals who exhibit similar background characteristics (McPherson, Smith-Lovin, and Cook 2001). The ability to form friendships with individuals of the same race/ethnicity may decline as racial/ethnic heterogeneity in schools increases (see Moody 2001). Racial/ethnic minority or socioeconomically disadvantaged students may have a decreased sense of social belonging in more integrated schools, because it may be difficult for these students to form same-race/ethnicity friendship ties in integrated schooling environments.

Exposure to non-minority and non-poor students may also threaten Mexican origin student engagement in school through social comparison processes including relative deprivation, cultural conflict, and competition (Jencks and Mayer 1990). In the relative deprivation model, a student's disadvantaged socioeconomic background becomes more salient when he/she is exposed to more socioeconomically advantaged peers (Jencks and Mayer 1990). If two students from impoverished households were placed in different schools—one with high-SES students and one with low-SES students, the student in the school with high-SES students will feel the most disadvantaged. Jencks and Mayer (1990) note that students may respond to relative deprivation by putting forth more effort in schools (i.e. by "rising to the occasion") or by detaching or withdrawing from school.

In the cultural conflict model, students who face a similar set of constraints on their success in school develop greater group solidarity, but the group response to these constraints may be inimical to positive school outcomes. Jencks and Mayer (1990) argue that cultural

conflict is most likely to arise in settings where success is very unequally distributed. Finally, the competition model asserts that competition for grades and academic standing is heightened in higher SES schools. Students may disengage from competitive schooling environments if they feel they cannot compete (Jencks and Mayer 1990).

For minority and poor students, exposure to white and affluent students in schools could threaten engagement by increasing the salience of racial/ethnic differences with peers and enacting stereotype threat. Prior studies demonstrate that exposure to white and affluent students can increase the salience of minority status or socioeconomically disadvantaged status among black and Latino students (Holland 2012; Ispa-Landa 2013).

The increased salience of racial/ethnic and socioeconomic differences in these schooling environments could place minority students such as Mexican origin youth in a position where they must directly confront discrimination and/or negative stereotypes.

Steele (1997) defines stereotype threat as the "social-psychological threat that arises when one is in a situation of doing something for which a negative stereotype about one's group applies" (614). For example, a minority student in a majority white school may confront negative stereotypes about low achievement among minorities, and this student may question his/her own abilities (Holland 2012; Ispa-Landa 2013). Steele (1997) argues that chronic or sustained exposure to stereotype threat can lead to "disidentification" from the domain where the threat is encountered. In disidentification, a person reconceptualizes his/her values by decoupling the domain of interest from his/her self-identity. For example, students who encounter repeated stereotypes in school may stop identifying with school norms and values in order to protect themselves or distance themselves from stereotype threat. The stereotype threat

hypothesis implies that Mexican origin youth may withdraw from school if their racial/ethnic and socioeconomic differences with peers trigger the enactment of stereotypes.

In sum, attending a high-minority, high-poverty school may promote rather than inhibit engagement among Mexican origin youth by promoting social belonging. Conversely, increasing exposure to non-minority and non-poor students could depress Mexican origin engagement through negative social comparison processes and intergroup relations that lead to relative deprivation, cultural conflict, competition, and stereotype threat.

School Composition and Engagement Patterns Amongst Latino/a and Mexican Origin Youth

Few prior studies have assessed the interplay between school composition and engagement patterns among Mexican origin youth as a national origin group of interest. However, research on psychosocial educational outcomes amongst Latino/a and Mexican origin students point to a potential school isolation "paradox" for Mexican origin school engagement patterns.

The children of Mexican immigrant parents in kindergarten have higher mental health scores than whites after controlling for differences in background characteristics and school context, and this mental health advantage widens as the percent of students in poverty in Mexican origin students' schools increases (Crosnoe 2005). Latino/a students in segregated-minority schools also have more optimistic and "pro-school" attitudes than whites in majority-white schools, even after adjusting for differences in individual, family, school, and neighborhood characteristics (Goldsmith 2004).

Conversely, Latino/a youth from low-income families exhibit more adverse psychosocial outcomes as they gain exposure to socioeconomically advantaged students in schools. Crosnoe (2009) shows that low-income Latinos in "middle" income schools (schools with 20 to 40

percent of children in middle- or high-income families) have higher levels of negative self-image, greater perceived social isolation, and increased rates of depression than low-income Latino students in low-SES schools, even after adjusting for observable confounders. The reverse pattern holds for white students. Non-Latino white students' psychosocial outcomes are more favorable in middle-income versus low-income schools.

The positive association between exposure to co-ethnic students and engagement may not be restricted to the Mexican origin population. A number of studies show the benefits of attending schools with high proportions of same-race/ethnicity peers for psychosocial and school engagement outcomes among all students. For instance, middle-school students are more attached to school as the percentage of students of the same-race/ethnicity in the school increases, net of individual, family, and school background characteristics (Johnson et al. 2001). Kindergarten teachers also report that students show fewer negative externalizing behaviors and exhibit slightly greater interpersonal skills as the percent of students of the same-race/ethnicity increases, regardless of the level of racial/ethnic diversity in the school and net of observable confounding variables (Benner and Crosnoe 2011).

Using Add Health, Ueno (2009) also shows that students are more attached to school as the proportion of same-race/ethnicity friends increases, net of individual-level predictors of attachment. She shows that Latino/as in schools with at least 50% of co-ethnic Latino/a students and friendship networks that are composed of all Latino/a peers have the highest adjusted levels of school attachment.

Frost (2007) also finds that Texas high school students attending schools with higher proportions of Latino/as students exhibit higher net educational expectations. Frost shows a generalized positive relationship between the percent of Latino/a students in the school and

educational expectations among all students. Notably, the positive relationship Latino/a concentration and educational expectations only emerges once average levels of parental education and achievement are held constant among students across schools. Frost's findings suggest that low socioeconomic status and low average levels of achievement in high-Latino/a schools masks the positive influence of the percentage of Latino/a students in the school on student educational expectations.

All of these studies suggest that isolation with peers from similar racial/ethnic and socioeconomic backgrounds will have a positive impact on Mexican origin school engagement levels. Conversely, Mexican origin school engagement levels should decrease as these students gain exposure to non-minority and non-poor students.

III. RESEARCH GOALS AND HYPOTHESES

The goal of this dissertation chapter is to determine whether Mexican origin youth experience a "school isolation paradox" on measures of school engagement. I assess whether Mexican origin school engagement levels decrease as these students gain greater exposure to non-minority and socioeconomically advantaged peers in schools.

Hypothesis 1: Mexican origin youth will be less engaged in school as they gain exposure to non-minority and non-poor youth in schools.

It is possible that only minority students such as Mexican origin youth exhibit a school isolation paradox for engagement. To assess this possibility, I determine whether the racial/ethnic background of the student moderates the relationship between school compositional characteristics and engagement.

Hypothesis 2: The relationship between school composition and engagement will depend on student racial/ethnic status. Only minority students, including Mexican origin youth, will exhibit a school isolation paradox for engagement.

IV. DATA AND METHODS

Data and Sample

To analyze the school compositional characteristics of Mexican origin youth and their peers, I use the restricted-use Educational Longitudinal Study of 2002 (ELS:2002), from the National Center for Education Statistics (National Center for Education Statistics, Institute of Education Sciences 2015b). The ELS:2002 includes a nationally representative sample of approximately 16,200 students in 750 schools throughout the United States. The ELS:2002 sample was drawn using a two-stage sampling design. Schools were sampled first using a probability proportional to size sampling technique, and approximately 26 students within each school were subsequently sampled via random sampling.

I focus only on the base-year ELS:2002 sample in this chapter. The base-year sample includes approximately 15,240 students who were 10th graders in 2002. The data do not include students who dropped out of school prior to 10th grade or who may have migrated to the United States as teenagers and never enrolled in U.S. schools (Oropesa and Landale 2009).[23] The total

[23] To estimate the degree of potential bias associated with the selective nature of the ELS:2002 sample, I calculated the school attrition rates of Mexican origin students by age. Using the 2001 American Community Survey (ACS) microdata sample (Ruggles et al. 2010), I estimated the proportion of Mexican origin youth that were not enrolled in school prior to age 15 in 2001, the year prior to when the ELS:2002 survey was administered to 10th graders. The percentage of Mexican origin youth that were not enrolled in school in 2001 was 1.2% for 12 year-olds, 2.1% for 13 year-olds, and 1.5% for 14 year-olds, 3.8% for 15 year-olds, 9.0% for 16 year-olds, and 18.8% of 17 year-olds. Thus, fewer than 2.0% of all Mexican origin Latino/a youth are likely excluded from the ELS:2002 sample due to school attrition prior to age 15. Oropesa and Landale

sample varies depending on levels of missing data on the dependent variables of interest, as cases with missing dependent variables are dropped from the analysis. Table 4.1 lists descriptive statistics for the base-year ELS:2002 sample and for the samples used for each of the four dependent variables. There are no major differences in sample characteristics for the four outcomes of interest. Missing values on the dependent variables of interest do not appear to be systematically related to the independent variables used in this analysis.

I categorize students in the ELS:2002 base-year sample into six mutually exclusive racial/ethnic groups based on racial status, Hispanic status, and Hispanic subgroup (for Latinos): Non-Latino White (n=8,680), Non-Latino Black (n=2,020), Non-Latino Asian (n=1,400), Non-Latino Other Race (n=930), Mexican Origin Latino (1,500), and Latino- Other (n=760).[24] The "Non-Latino Other Race" category includes all non-Latino students that are not White, Black, or Asian, including American Indians, Alaskan Natives, Pacific Islanders, and multiracial youth. The "Latino- Other" category includes all Latinos who are not of Mexican origin.[25] For the purposes of brevity, I drop the "non-Latino" prefix when referencing all non-Latino groups. For example, "non-Latino white" students are referred to as "white" in this analysis.

Measures

Dependent Variables

(2009) also estimate that approximately 14.2% to 17.5% of foreign-born Mexican origin youth arrive in the United States as labor migrants who never enroll in school. Taking these figures into account, I estimate that there are approximately 3.5% of all Mexican origin youth that were not represented by the ELS:2002 sample because they were foreign-born youth that migrated and never enrolled in U.S. schools prior to 10th grade. In sum, the degree of bias in my results due to the selective nature of the ELS:2002 sample is likely minimal.

[24] Cell sizes have been rounded to the nearest tenth to comply with the restricted-use data regulations for the ELS:2002.

[25] There are significant national origin differences within the pan-ethnic Latino/a population (Portes and Rumbaut 2001). However, because the ELS:2002 only contains a small number of cases representing non-Mexican origin national origin Latino/a subgroups, I categorize these groups jointly as "Other" Latino/as.

The dependent variables in this analysis are intended to capture distinct domains of student engagement. Student engagement is a multi-faceted construct that involves affective, cognitive, and behavioral components (Lawson and Lawson 2013). The affective component of school engagement is often referred to as attachment (Johnson et al. 2001; Lawson and Lawson 2013; Ueno 2009). The behavioral component of attachment can encompass a wide range of actions and behaviors within school or related to schooling.

Studies analyzing racial/ethnic differences in school attachment (i.e. affective engagement) patterns have created indices based on whether the student feels close to people at the school, feels a part of the school, and is happy to be at school (Johnson et al. 2001; Ueno 2009). Similarly, social belonging has been measured based on questions such as whether the student feels that he/she belongs in school, feels lonely, makes friends easily, feels liked by teachers, and/or feels awkward or out of place at school (Ma 2003). Studies that seek to measure the behavioral dimension of engagement have created indices using variables such as involvement in homework activities, school preparation, tardiness or skipping school, attentiveness in class, athletic participation, and arts participation (Johnson et al. 2001; Ream and Rumberger 2008).

Based on this prior research, I identify 28 potential measures of student engagement in the ELS:2002 from both student and teacher reports. Appendix Table A.1 includes a list and description of each of these engagement-related variables. I conduct exploratory factor analysis to evaluate whether multiple measures capture a similar underlying dimension of student engagement. Principal factor analysis reveals the existence of two factors with Eigenvalues greater than 2.0, indicating that two variables or more are represented by a common underlying factor.

The first factor (Eigenvalue: 6.8) represents teacher perceptions of student effort and engagement in coursework at school, and is based on reports from students' math and English teachers in ELS:2002. The ELS:2002 dataset includes variables from surveys given to each ELS:2002 participant's math and English teacher that is attached to the student record (including a flag if the math or English teacher did not complete a survey). Four variables from math and English teacher reports have factor loadings higher than +/-.6 on the first factor: The teacher agrees that the student works hard for good grades; how often the student completes homework; how often the student is attentive in class, and; whether the student has fallen behind in school.

I create an *index of coursework engagement* using these eight variables (one set of variables from the student's math teacher and one set of variables from the student's English teacher). To create this index, I standardize each variable to have a mean of zero and a standard deviation of 1.0. I reverse code the "student has fallen behind in school" variable, so that positive values represent that the student has not fallen behind in school. The Cronbach's alpha scale reliability coefficient for these eight standardized variables is .89.

These eight standardized measures are summed and divided by eight (the total number of variables used to create the index). For cases in the base-year sample of interest where some, but not all, of the variables used to create the index are missing (n=4,580), I create the index variable based on the available non-missing variables. Approximately 26.4% (n=1,210) of these cases have at least 7 out of 8 possible course engagement measures, and 62.7% (n=2,870) have 4 out of 8 possible course engagement measures, usually because only one teacher (math or English) filled out a survey about the student. In multivariate models, I include a variable indicating how many non-missing variables were used to create the coursework engagement index.

The resulting index is standardized to have a mean of zero and a standard deviation of 1.0, with a minimum value of -3.27 and a maximum value of 1.27. Higher values indicate greater levels of coursework engagement, as reported by teachers. The coursework engagement index is left-skewed, with a median value of .31. In other words, most students have fairly high levels of coursework engagement.

The second factor from the exploratory factor analysis has an Eigenvalue of 2.8, and represents *coursework preparation*. Three variables based on student reports have factor loadings higher than +/- .6 for this factor: How often the student goes to class without a pencil/paper; how often the student goes to class without book/s, and; how often the student goes to class without homework. These variables have already been combined into an index variable called the "class preparation scale," in the ELS:2002 student-level data. However, the class preparation scale was only created for students who had non-missing values for all three original response variables, and approximately 6.2% of all cases in ELS:2002 sample have missing values.

I re-create the class preparation scale, but include cases that have a response on any of the three variables used to create the index. This method allows me to re-capture 220 cases that originally had missing values for the ELS:2002 coursework preparation index measure. To create the revised class preparation index variable, I sum the standardized versions of the three indicator variables and divide by the total number of non-missing responses for these variables for the participant. The Cronbach's alpha for these three variables is .81. For approximately 220 cases in the final sample of interest, the preparation index is created based on two measures (n=160) or one measure (n=60), rather than three measures. In multivariate analyses, I include a control for the total number of variables used to create the course preparation index.

The resulting course preparation index is standardized to have a mean of zero and a standard deviation of 1.0. The variable has a minimum value of -2.8 and a maximum value of 1.4. The variable is left-skewed, with a median value of .24, indicating that most students have fairly high levels of coursework preparation.

As the goal of my analysis is to capture multiple dimensions of student engagement, I also analyze two other potential measures of engagement. The first measure, *likes school*, is based on a question that asks how much the student likes school (BYS28). The responses to this question include "Not at all", "Somewhat", and "A Great Deal." I code students that say that they like school "Somewhat" or "A Great Deal" as "1" for liking school, and "0" for students who do not like school at all.

The final measure is *student involvement in school-sponsored activities*. The ELS:2002 includes a measure of the number of school-sponsored activities that the student participated in during the 2001-2002 academic year (BYXTRACU). I classify students that are involved in any school activity as a "1" (participates in school-sponsored activities), and assign a "0" to those students that are not involved in any school-sponsored activity. Among students in the sample of interest who are engaged in any school-sponsored activity (n=7,840), approximately 50.3% of cases are involved in one activity, 26.4% of cases are involved in 2 activities, 13.0% are involved in 3 activities, and the remaining 10.3% of cases are involved in 4 or more activities.

Independent Variables- School Racial/Ethnic and Socioeconomic Composition

The main independent variables of interest are the racial/ethnic and socioeconomic composition of schools attended by students in the ELS:2002 in 10th grade. I measure racial/ethnic composition using the percent of non-minority students in the school and the average socioeconomic status of students in the school.

The restricted-use ELS:2002 includes a measure of the percent of minority students in the school (in 2001-2002) that is linked into the ELS:2002 from the Common Core of Data (CCD). I subtract the percent of minority students in the school from 100 to obtain the percent of non-minority students in the school. Minority groups identified include non-Latino blacks, non-Latino Asians and Pacific Islanders, non-Latino American Indians or Alaskan Natives, and Latinos of any race. The percent of non-minority students thus largely represents the percentage of non-Latino Whites in the school.

Approximately 280 out of 15,240 students in the sample of interest (1.8%) are missing values for the percent of non-minority students in the school. Students with missing values on this measure are assigned the mean percent non-minority value of schools that have the same percentile rank for the in-sample percentage of non-Latino white students in the school.[26]

I calculate the average socioeconomic status of students in the school using in-sample student-level data on household socioeconomic status to create an aggregate school-level

[26] For students in schools with missing values for the CCD measure of the percent of non-minority students in the school, I assign the CCD percent non-minority value that corresponds to schools with similar in-sample percentages of non-Latino white students. The "in-sample" or "sample-based" percent white measure refers to the percent of non-Latino white students within each school that is estimated based on the ELS:2002 sample. The base-year ELS:2002 sample includes approximately 26 students sampled randomly from each school, with some students oversampled, such as Asians and Pacific Islanders. For the sample-based school percent non-minority measure, I calculate the approximate percentage of white students in the school by dividing the sum of the number of non-Latino white students (multiplied by their base-year person weights) by the sum of all students in the sample for the school (multiplied by their base-year person weights) and multiplying by 100. I then calculate the school's percentile rank for the percent of white students in the school. I then calculate the mean CCD percent non-minority value for each sample-based percentile rank for schools with non-missing CCD percent non-minority values. I then assign the mean CCD percent non-minority value to schools with missing CCD percent non-minority values, based on the school's percentile rank for the sample-based percent white measure. For instance, for a school that is in the 92nd percentile for percent white based on in-sample characteristics, I assign the mean CCD percent non-minority value that is obtained by taking the mean CCD percent non-minority value for all other schools in the 92nd percentile for the in-sample percent white measure.

measure that is assigned to students through the school identification number.[27] The ELS:2002 includes a composite measure of household socioeconomic status for each student (BYSES1). This variable is an index that combines measures of parental educational attainment, family income, and parental occupational prestige (SEI score).

The base-year ELS:2002 sample includes approximately 26 students sampled randomly from each school. However, some students were oversampled, such as Asians and Pacific Islanders. The ELS:2002 does not include a within-school sample weight, so there is no way to determine exactly how many students each case in the ELS:2002 represents within his/her school. However, I use the base-year student weights in the ELS:2002 as an approximation of within-school weights.

For each student *i* in school *j*, the average SES of the school is calculated using the formula below. This value is then assigned to all students in school *j*.

$$[(\Sigma\ (=\text{Base-year SES for Student}_{ij})*(\text{Base-Year Weight for Student}_{ij}))/$$

$$\Sigma\ (\text{Base-Year Weight for Student}_{ij})\ ] * 100$$

[27] Creating an aggregate school-level measure of average socioeconomic status using student-level measures in the ELS:2002 is less than ideal, given the fairly small number of students that are sampled randomly within schools. However, I have chosen this measure over alternatives for several reasons. First, although the ELS:2002 dataset includes a measure of the percent of students receiving Free and Reduced Price Lunch from the Common Core of Data, this variable has a high number of missing values (%). There is not a measure of eligibility for free and reduced price lunch at the student level that would allow me to impute missing values. Free and reduced price lunch (FRPL) may also be a poor overall measure of socioeconomic status, because this measure contains both "false positives"—students who are not eligible for FRPL but are listed as eligible—and "false negatives"—students who are eligible for FRPL but do not apply (see Harwell and LeBeau 2010). Variables such as parental education and occupation, household composition, and income are preferable measures of socioeconomic status when compared to federal cut-off points for poverty status (Hauser 1994). For this reason, I use an aggregate school-level measure of socioeconomic status based on in-sample student characteristics. The base-year socioeconomic status index is available for all students in the ELS:2002 sample, and takes into account parental education, occupation, and income.

The pair-wise correlation between the CCD percent non-minority measure and the school mean SES measure is approximately .43 for the total sample of interest. However, the correlation between these two measures differs by student racial/ethnic status. For minorities (all groups except whites), the correlation between percent non-minority and school mean SES is .52. For whites, the correlation between percent non-minority and school mean SES .15, indicating that school racial/ethnic and socioeconomic composition is largely decoupled for white students relative to minority students.

Independent Variables- Control Variables

In all multivariate models, I add controls for variables that could influence both student selection into schools and school engagement patterns. The Mexican origin population includes both foreign-born youth with foreign-born parents, foreign-born youth with U.S.-born parents, and U.S.-born youth with U.S.-born parents. Immigrant generational status may shape both the risk of attending certain types of schools as well as levels of engagement. To measure immigrant generational status, I combine information on nativity and duration of residence to create immigrant generational groups, based on Rumbaut's (2004) typology for fractional generations.

The ELS:2002 dataset includes information on student, maternal, and paternal nativity and student age of arrival from the parent questionnaire administered during the base-year survey in 2002. I use this information to classify students into five immigrant generational groups: Third and higher generation, 2nd/2.5 generation, 1.75 generation, and 1st/Foreign-born (FB) "Other" generation. The 3rd and higher generation includes U.S.-born students who have parents that are U.S.-born. The 2nd-/2.5-generation includes U.S.-born students that have one or two parents who are foreign born. Foreign-born students are divided into two groups, based on parental reports of age of arrival. The 1.75 generation includes foreign-born students who

arrived in the United States before the age of five. This group is distinct from other foreign-born youth, because these students have likely attended school only in the United States. Finally, the 1st/FB Other category includes foreign-born students who arrived after the age of five, as well as foreign-born youth who are missing information on age of arrival. These foreign-born youth have fewer years of exposure to the U.S. education system than the 1.75 generation, and likely experienced discontinuity in their educational experiences due to the act of immigration.

I control for several household characteristics that could influence selection into schools and student engagement. To measure household socioeconomic resources, I use the student-level household socioeconomic status (SES) composite variable in the base-year ELS:2002. The SES variable is an index that combines measures of parental educational attainment, family income, and parental occupational prestige (SEI score). The SES composite variable is normally distributed, and ranges from approximately -2.0 to 2.0. I also divide students into four family composition categories: Intact (both biological or adoptive parents in the household), stepparent (one biological/adoptive parent and one stepparent), mother only, and "other" (father only, grandparent/s, sibling/s, or other family composition).

Finally, I control for academic risk factors prior to 10th grade that could influence student engagement patterns. I control for whether a student repeated a grade one or more times prior to 10th grade, and whether the student changed schools once, or two or more times, prior to 10th grade.

Analytic Strategy

I analyze the relationship between school compositional variables and the dependent variables of interest using multilevel regression models, with students "nested" in schools. These models adjust for differences in student background factors that could confound the

relationship between school composition and engagement outcomes. For the binary outcome variables (*likes school, involvement in school-sponsored activities*), I use multilevel logistic regression models. For the continuous outcome variables (*coursework engagement, coursework preparation*), I use multilevel linear regression models.

The basic functional form of a multilevel logistic regression model with both Level 1 (student-level) and Level 2 (school-level) predictors is as follows:

$$\log it(\Pr[nonenroll_i = 1]) = \alpha_{school[j]} + \mathbf{B}_{ij} X_{ij}$$

$$\alpha_{school[j]} \sim N(\gamma_0 + \Gamma_{school} \mathbf{M}_{school}, \sigma^2_{school})$$

Similarly, the functional form of a multilevel linear regression model with both Level 1 and Level 2 predictors is as follows:

$$y_{ij} = \alpha_{school[j]} + \mathbf{B}_{ij} X_{ij} + \varepsilon_{ij}$$

$$\alpha_{school[j]} \sim N(\gamma_0 + \Gamma_{school} \mathbf{M}_{school}, \sigma^2_{school})$$

In both of these equations, B_{ij} represents the fixed parameter estimates for all student-level background factors that may be correlated with dropout, and $\Gamma_{school[j]}$ represents the fixed parameter estimates for school-level predictors. The multilevel logistic regression models are varying intercept models; they allow the average log-odds of dropout to vary by school, as represented by $\alpha_{school[j]}$.

For all outcomes, I display the variance of the random (school) intercepts. This parameter represents the between-school variance in the outcome of interest. For the continuous outcomes, I also calculate the intraclass correlation coefficient (ICC). The ICC is the total between-school variance divided by the total variance (between- plus within-school variance.) The ICC value ranges from zero to 1.0. A value of 1.0 would indicate that all cases within

groups (schools) have the same values and all groups (schools) have different average values. In contrast, an ICC value of zero would indicate that groupings are essentially meaningless, because all variance in the outcome is within rather than between schools.

All continuous independent variables in the multilevel logistic regression models are centered at their means. I also display the Bayesian Information Criterion (BIC) value for all multilevel logistic regression models as a measure of goodness of fit (Hauser 1995; Raftery 1995).

V. RESULTS

Differences in levels of school engagement between Mexican origin youth and their peers

I begin by comparing levels of school engagement between Mexican origin youth and their peers. Table 4.2 displays levels of engagement for racial/ethnic groups for each dependent variable. Mexican origin youth show high levels of affective engagement in school, but lower levels of behavioral engagement. As indicated by the results in Table 4.2, a high percentage of all students (88.2%) say that they like school. Minority youth, including Mexican origin youth, non-Latino black youth, and non-Latino Asian youth, are more likely to state that they like school than white students. This finding is consistent with previous research demonstrating that an oppositional standing towards school is not widespread among minority students (Ainsworth-Darnell and Downey 1998; Carter 2005; Harris 2011).

Mexican origin youth are 4.8 percentage points more likely to say that they like school relative to students. This result is consistent with prior work demonstrating that Latino/as have higher levels of educational optimism relative to non-Latino whites as measured by educational aspirations and expectations (Goldsmith 2004; Kao and Tienda 1998).

Nonetheless, Mexican origin students' positive affective orientations towards school is not accompanies by high levels of behavioral engagement. Mexican origin youth in ELS:2002 have lower levels of teacher-reported coursework engagement relative to white and Asian students (an approximately .3 and .5 standard deviation difference, respectively). However, Mexican origin youth have comparable or slightly higher levels of coursework engagement than black, Other race, and Other Latino students. Mexican origin Other Latino/a students have the lowest levels of coursework preparation of all racial/ethnic groups. The gap in coursework preparation between Mexican origin and white students is approximately .3 standard deviations.

Mexican origin students also have the lowest average levels of involvement in school-sponsored activities of any racial/ethnic group in ELS:2002. Only 1-in-3 Mexican origin youth participates in at least one school sponsored activity, compared to over half of white and Asian youth. Mexican origin youth are also less likely to participate in school-sponsored activities relative to black students and Other Latinos.

Do Mexican origin school engagement levels vary according to the racial/ethnic and socioeconomic composition of their peers in school? I address this question in the next section.

Differences in levels of school engagement among Mexican origin youth and their peers by school compositional characteristics

The analysis of racial/ethnic differences in school engagement measures reveals an affective/behavioral paradox for Mexican origin youth. Mexican origin students are more likely to report that they like school than white and Asian youth, but they have lower levels behavioral engagement in school relative to these groups. I now address the question of whether the relationship between affective and behavioral school engagement among Mexican origin youth varies according to the racial/ethnic or socioeconomic composition of the school. Table 4.3 displays the mean engagement levels among Mexican origin youth according to quartiles of the

percent non-minority students in the school and the mean socioeconomic status of students in the school. The quartiles are established based on the distribution of Mexican origin students in the base-year ELS:2002 sample across schools. (See the footnote on Table 4.3 for the quartile cut-off points for each measure.)

The relationship between exposure to non-minority students in school and engagement among Mexican origin youth depends on the engagement measure analyzed. Mexican origin youth are less likely to state that they like school as they gain exposure to non-minority students. As Table 4.3 shows, those in the schools with the highest concentrations of minorities (1st quartiles of percent non-minority) are the most likely to report that they like school. However, Mexican origin youth report high levels of liking school (90.4% or higher) across all percent non-minority quartiles.

The relationship between exposure to non-minorities and coursework engagement is slightly non-linear. Coursework engagement levels among Mexican origin youth decrease between the 1st percent non-minority quartile and the 2nd and 3rd quartiles. However, the coursework levels of Mexican origin youth in the least minority concentrated schools (4th quartile) are comparable to those in the most minority concentrated schools (1st quartile).

In contrast, coursework preparation levels are fairly constant across school percent non-minority quartiles. This results suggests that that coursework preparation among Mexican origin youth may not be related to school compositional characteristics.

Finally, Mexican origin youth that attend the schools with the highest concentrations of non-minorities (4th quartiles), have noticeably higher levels of participation in school-sponsored activities than those with lower concentrations of non-minorities. Levels of activity involvement among Mexican origin youth are fairly stable among those in schools with fewer than 58% of

non-minority students (the 1st, 2nd, and 3rd quartiles). However, Mexican origin youth that attend schools where over 58% of fellow students are non-minorities are over 10 percentage points more likely to participate in school-sponsored activities than their peers in schools with lower percentages of non-minorities. This finding suggests that majority white schools may offer greater opportunities for involvement in activities for Mexican origin youth.

The relationship between exposure to higher SES youth and engagement among Mexican origin youth follows a similar pattern. Table 4.3 indicates that Mexican origin students that have greater exposure to higher SES youth (those in the 3rd and 4th quartiles) are less likely to report that they like school than those in lower SES schools. Mexican origin youth are slightly less likely to be engaged in coursework with exposure to students from higher SES background from the 1st to the 3rd quartiles. However, Mexican origin youth in the highest SES schools (4th quartile) have indistinguishable levels of engagement from those in the lowest SES schools (1st quartile) when uncertainty in the estimates is taken into account.

Mexican origin youth in the lowest SES schools also appear to be less prepared for coursework than those in higher SES schools. Those in the highest SES schools (4th quartiles) have higher levels of preparation than those in the lowest SES schools (1st quartile), although not beyond the margin of error.

Finally, Mexican origin involvement in school-sponsored activities increases with greater exposure to higher SES students. Mexican origin youth in the highest SES schools have 13.7 percentage points higher levels of engagement than those in the lowest SES schools. This finding suggests that higher SES schools offer Mexican origin youth the greatest opportunities for involvement in school-sponsored activities.

The descriptive results do not reveal a clear negative or positive association between exposure to non-minority and higher SES youth and Mexican origin engagement patterns. Mexican origin youth have weaker affective orientations towards schooling as they gain exposure to non-minority and non-poor youth. Their coursework engagement levels appear to decline with increasing exposure to non-minority and higher SES students, but they rebound in the schools with the highest concentrations of non-minority students and highest average student SES levels. Coursework preparation is largely unrelated to school compositional characteristics. Finally, Mexican origin youth in the highest non-minority and highest SES schools are the most likely to be involved in school-sponsored activities. These results hint at a potential affective/behavioral trade-off for Mexican origin youth in more racially/ethnically and socioeconomically integrated schools. Mexican origin youth are less likely to say that they like school as they gain exposure to non-minority and non-poor students, but they are more likely to be involved in school-sponsored activities.

School Composition and Mexican Origin Engagement Patterns: Multivariate Results

I next use multilevel regression models to determine whether the relationships between school compositional characteristics and Mexican origin school engagement levels persist after controlling for individual- and household-level factors that could affect both selection into schools and levels of engagement. In this section, I am interested in answering two questions. First, is there a "net" negative relationship between exposure to non-minority and higher SES youth and Mexican origin engagement patterns? Second, does the relationship between school compositional characteristics and engagement differ for the Mexican origin population relative to members of other racial/ethnic groups?

To answer these questions, I run a series of multilevel regression models for each dependent variable in interest. In each set of models, I first examine the relationship between the school compositional measure of interest and engagement for the overall ELS:2002 sample. I then add interaction terms between student race/ethnicity and the school compositional variables of interest. In these models, Mexican origin youth are the racial/ethnic reference group. The coefficient for the school compositional variable of interest thus represents the association between school composition and engagement among Mexican origin students. The interaction terms represent the degree to which this relationship varies for other racial/ethnic groups. After running these interaction models, I then adjust for background factors that could influence selection into schools and student engagement. To evaluate the possibility that school racial/ethnic and socioeconomic composition jointly impact engagement, I also estimate models that add an interaction for the percent of non-minority students and the mean SES levels of the school.

School Composition and Liking School

Table 4.4 shows the results of logistic regression models that predict whether a student likes school somewhat or a great deal versus those that do not like school at all. The main finding from the results in Table 4.4 is that Mexican origin youth have significantly lower "net" odds of liking school as they gain increasing exposure to non-minority youth.

Model 1 indicates that exposure to non-minority students is associated with slightly lower levels of liking school. Among all students, the odds of liking school decrease by approximately .7% with each 1.0 percentage point increase in the non-minority population in the school. In other words, all students are less likely to report that they like school as they gain exposure to non-minority students.

Model 2 adds an interaction term for student racial/ethnic status nd the percent of non-minorities in the school. The coefficient for school percent non-minority now represents the association between this variable and liking school for Mexican origin youth, the racial/ethnic reference group. For Mexican origin youth, the odds of liking school decline by approximately .9% for every 1.0 point increase in the percentage of non-minority students in the school (Model 2). The significant negative relationship between exposure to non-minorities and liking school persists for Mexican origin youth in a model that adjusts for background factors (Model 3). In other words, Mexican origin youth are significantly less likely to report that they like school with increasing exposure to non-minority students, net of individual and household background factors as well as net of the socioeconomic level of the school. None of the racial/ethnic interaction terms are significant in Model 1 or Model 2, indicating that the negative relationship between exposure to non-minorities and liking school does not differ for Mexican origin youth relative to other youth.

Liking school does not appear to be significantly related to exposure to higher SES youth. This result is true for both the overall student population (Model 4) and the Mexican origin population (Models 5 and 6). The relationship between exposure to non-minority students and liking school is also not moderated by the socioeconomic status of peers in the school (Models 7-9).

To summarize, Mexican origin youth in "whiter" schools are significantly less likely to say that they like school, even in models that adjust for differences in student and household background characteristics and the socioeconomic level of the school. This finding suggests that exposure to non-minority students has a slightly negative impact on Mexican origin students' affective engagement in school, and validates the "school isolation paradox" hypothesis.

School Composition and Coursework Engagement

I now turn to an analysis of school composition and coursework engagement patterns. The coursework engagement measure is an index variable created from English and math teacher surveys about the behavior of students. The major takeaway result from Table 4.5 is that there is not a "net" relationship between school composition and coursework engagement for Mexican origin youth. The observed relationships between school composition and Mexican origin coursework engagement must be attributed to factors related to selection into schools that also impact coursework engagement.

For all students, coursework engagement increases as exposure to non-minority students increases (Model 1). However, in a model that adds an interaction term for student racial/ethnic status (Model 2), the relationship between the percentage for the percentage of non-minority students in the school and Mexican origin coursework engagement is not significant.

For all students, as well as for Mexican origin students, coursework engagement increases as the mean SES level of the school rises (Models 4 and 5). For Mexican origin youth, a 1.0 standard deviation increase in the mean SES level of the school increases the coursework engagement levels by .241 points (approximately one-quarter of a standard deviation). However, this positive association between exposure to non-minority students and coursework engagement is non-significant when background confounders are taken into account (Model 6). In other words, Mexican origin youth in higher SES schools have background characteristics that are associated with higher coursework engagement in school. The SES level of the school does not have a positive "net" impact on Mexican origin coursework engagement.

There are no notable differences in the association between school composition and coursework engagement for other racial/ethnic groups relative to Mexican origin youth (Models

2, 3, 5, 6). Additionally, there is not a significant interaction between the racial/ethnic and socioeconomic composition of the school and coursework engagement (Models 7-9).

School Composition and Coursework Preparation

I next turn to the outcome of coursework preparation. The main finding from Table 4.6 is that there is no "net" relationship between school composition and coursework preparation among Mexican origin youth. All students, as well as Mexican origin students, have higher levels of preparation in school as they gain exposure to non-minority peers (Models 1 and 2). For every 1.0 percentage point increase in the non-minority student population, the coursework preparation levels of Mexican origin youth increase by .002 standard deviations. However, this relationship is explained by Mexican origin background characteristics related to coursework preparation. The relationship between school percent non-minority and coursework preparation becomes non-significant after adjusting for these background factors (Model 3).

Similarly, Mexican origin exposure to higher SES students is positively related to coursework preparation (Model 5), but this relationship becomes non-significant once background controls are taken into account (Model 6). In other words, Mexican origin youth in higher SES schools have background characteristics that facilitate higher coursework preparation in schools.

There are no notable differences in the association between school composition and coursework preparation for other racial/ethnic groups relative to Mexican origin youth (Models 2, 3, 5, 6). Additionally, there is not a significant interaction between the racial/ethnic and socioeconomic composition of the school and coursework engagement (Models 7-9).

School Composition and Involvement in School-Sponsored Activities

The final school engagement variable of interest is involvement in any school-sponsored activity. The main takeaway result from Table 4.7 is that "net" Mexican origin involvement in school-sponsored activities increases as these youth gain exposure to higher SES students. All students are significantly more likely to be involved in school-sponsored activities as the percentage of non-minority students in their schools increases (Model 1). For Mexican origin youth, the odds of being involved in activities increase by .8% with every 1.0 percentage point increase in the non-minority student population in the school (Model 2). However, this relationship becomes non-significant after adjusting for background confounders and the socioeconomic status of the school (Model 3). Additionally, the relationship between involvement in activities and exposure to non-minority students is non-significant for other racial/ethnic groups in the adjusted model (Model 3). In other words, Mexican origin students that have background characteristics that are positively associated with involvement in activities attend schools with more non-minority students.

However, Mexican origin involvement in activities is strongly positively related to the socioeconomic status of peers in schools, even net of background confounders. For all students, the odds of being involved in school-sponsored activities increase by a factor of 2.03 for each 1.0 standard deviation increase in the socioeconomic status of the school (Model 4). The odds of involvement in activities for Mexican origin youth increase by 109% for each 1.0 standard deviation increase in the mean school SES level (Model 5).

Adjusting for differences in background characteristics and school racial/ethnic composition attenuate, but do not eliminate, the relationship between school SES levels and Mexican origin involvement in activities (Model 6 versus Model 5). The "net" odds of involvement in school-sponsored activities among Mexican origin youth are 42.0% higher for

every 1.0 standard deviation unit increase in the mean SES level of the school. These results suggest that higher SES schooling environments are conducive to involvement in activities for Mexican origin youth.

There is one notable school composition by student race/ethnicity interaction term in Model 6 that is worth mentioning. The odds of involvement in school-sponsored activities with exposure to higher SES youth differ for black youth relative to Mexican origin youth. In fact, the odds of involvement in activities decrease for black youth by approximately 13.4% (1.420 * .610 = .866) with each 1.0 standard deviation unit increase in the mean SES level of the school (Model 6). While Mexican origin students are more involved in activities in higher SES schools, black students are more withdrawn from activities with exposure to higher SES peers. This finding is intriguing and merits further scrutiny in future work.

VI. CONCLUSION

This analysis has explored the relationship between school racial/ethnic and socioeconomic composition and school engagement patterns among Mexican origin youth. Prior studies have demonstrated that Mexican origin youth are less engaged in school than their peers (Portes and Rumbaut 2001; Ream and Rumberger 2008). However, prior research also suggests that affective and behavioral engagement among Mexican origin youth should be the highest in minority and socioeconomically isolated schools, and should be lower as these students gain increasing exposure to white and non-poor students (Crosnoe 2005, 2009; Goldsmith 2004; Johnson et al. 2001; Ueno 2009). Using the ELS:2002, I have tested the premise that Mexican origin youth exhibit a "school isolation paradox" by examining whether Mexican origin school

engagement levels decline as these students gain increasing exposure to non-minority and higher SES peers in schools.

I do not find that school composition is significantly related to measures of engagement such as coursework engagement and coursework preparation once background confounders are taken into account. However, I do find a significant "net" relationship between school composition and whether a Mexican origin student likes school and Mexican origin involvement in school-sponsored activities.

For these two outcomes, my analysis reveals an affective-behavioral tradeoff for Mexican origin youth with exposure to non-minority and non-poor youth in schools. Mexican origin youth are significantly less likely to report that they like school as they gain exposure to non-minority students, even net of background confounders. However, they are more involved in school-sponsored activities in schools with higher SES peers. Thus, I only find support for the "school isolation paradox" for Mexican origin affective engagement (liking school), but not for their behavioral engagement (involvement in school-sponsored activities).

The findings on affective engagement weaken the notion that school integration is unequivocally beneficial for minority students such as Mexican origin youth. My results corroborate previous studies which find that Mexican origin and Latino/a youth exhibit more positive affective outcomes—such as orientations towards schooling and better mental health outcome—in minority isolated schools (Crosnoe 2005, 2009; Goldsmith 2004). While liking school may not be directly related to academic performance or attainment, expressing a lower affinity for school in non-minority schools could have negative impacts on longer-term outcomes among Mexican origin youth. For example, if a Mexican origin student experiences negative psychosocial outcomes with increasing exposure to white students, then this student may be less

likely to seek out environments in young adulthood—colleges, workplaces, social clubs—where they are likely to come into contact with whites.

Nonetheless, the benefits of attending a higher SES school for Mexican origin involvement in school-sponsored activities are undeniable. More affluent schooling environments may be providing Mexican origin youth with greater opportunities for behavioral engagement in school, which could have positive impacts on later outcomes such as admission to selective colleges and universities or involvement in activities in higher education.

Future research should seek to provide greater insight into the reasons why Mexican origin youth are less likely to express a positive affective orientation towards school as they gain exposure to non-minority students. Factors such as relative deprivation, cultural conflict, negative competition, and stereotype threat could negatively impact Mexican origin affective engagement as these students gain increasing exposure to white peers (Jencks and Mayer 1990; Portes and Hao 2004; Steele 1997). Future work, especially qualitative studies, could shed greater light on why Mexican origin youth experience more negative psychosocial outcomes as they gain exposure to white students.

Additionally, future research should attempt to identify the factors that inhibit Mexican origin behavioral engagement patterns in high-poverty schools. High-poverty schools may inhibit Mexican origin involvement in activities through resource deprivation (Jencks and Mayer 1990; Kozol 2012). Mexican origin youth in high-poverty schools may also have higher levels of familism—the subjugation of individual needs to the needs of the family (Desmond and Turley 2009; Ovink and Kalogrides 2015). Mexican origin youth in high-poverty schools may be less engaged in school than their peers because they need be more engaged with their families and/or to be involved in activities that economically support their families. Future work should

scrutinize these factors in order to find ways to boost behavioral engagement levels among Mexican origin youth in schools, in order to allow Mexican origin youth to match their positive orientations towards schooling with behaviors that promote educational attainment.

While this work provides greater insight into the relationship between school composition and Mexican origin engagement levels, the analysis has several limitations that must be acknowledged. While the ELS:2002 offers a comprehensive set of measures to investigate the relationship between school composition and engagement, it has some drawbacks for studying the Mexican origin population as an immigrant subgroup. The Mexican origin population in the ELS:2002 is only identified through student and parent survey questions regarding racial and ethnic identification. There is no measure of student birthplace or parental birthplace. The estimates of Mexican origin engagement levels may be upwardly downward if Mexican-born and Mexican-descent students who are more in school do not identify as Latino/as of Mexican origin (Duncan and Trejo 2007).

This analysis also focuses on engagement among Mexican origin 10th graders. The sample does not include Mexican origin students that drop out of school before 10th grade or Mexican origin youth who are newer foreign-born arrivals who never enroll in U.S. schools (Oropesa and Landale 2009). If these youth are more susceptible to school compositional influences on engagement, then my analysis will underestimate the impact of school racial/ethnic and socioeconomic composition on Mexican origin engagement. However, I argue that the degree of bias presented by the absence of these students is likely minimal, given low percentages of Mexican origin youth that are not enrolled in school prior to age 15 and the relatively small numbers of Mexican origin youth that never enroll in schools that would be present in the sample had they enrolled in school and persisted through 10th grade.

While "separate" does not mean "equal" for Mexican origin youth in U.S. schools, more research is necessary to shed light on how school compositional arrangements impact both the affective and behavioral outcomes of Mexican origin students. Given persistent Latino-white school segregation (Fiel 2013; Orfield et al. 2012), increasing socioeconomic school segregation (Owens, Reardon, and Jencks 2014), and the projected growth of the Latino/a population (Johnson and Lichter 2010), it is imperative to assess the impact of school isolation on the educational and psychosocial outcomes of Mexican origin youth.

Table 4.1. Mean Characteristics of Base-Year ELS:2002 Sample and Engagement Measures Samples (Weighted)

	Base-Year Sample		Likes School Sample		Coursework Engagement Sample		Coursework Preparation Sample		School-Sponsored Activities Sample	
Dependent Variables	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Likes School (among non-missing)	0.882	0.004								
Likes School- Missing	0.039	0.002								
Coursework Engagement (among non-missing)	-0.070									
Coursework Engagement- Missing	0.085	0.007								
Coursework Engagement- Total Measures Used	6.3	0.1								
Coursework Preparation (among non-missing)	-0.024									
Coursework Preparation- Missing	0.051	0.003								
Coursework Preparation- Total Measures Used	2.8	0.0								
School-Sponsored (SS) Activities- Any (among non-missing)	0.497	0.007								
SS Activities- Missing	0.019	0.002								

Table 4.1. (Cont'd.)

	Base-Year Sample		Likes School Sample		Coursework Engagement Sample		Coursework Preparation Sample		School-Sponsored Activities Sample	
Independent Variables	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Student Race/Ethnicity										
Mexican Origin	0.110	0.008	0.109	0.008	0.106	0.008	0.110	0.008	0.109	0.008
NL White	0.602	0.010	0.607	0.010	0.621	0.010	0.606	0.010	0.608	0.010
NL Black	0.144	0.007	0.141	0.007	0.137	0.007	0.141	0.007	0.141	0.007
NL Asian	0.039	0.003	0.039	0.003	0.037	0.003	0.039	0.003	0.039	0.003
NL Other Race	0.055	0.003	0.055	0.003	0.055	0.003	0.056	0.003	0.055	0.003
Latino- Other	0.049	0.003	0.049	0.003	0.046	0.003	0.048	0.003	0.048	0.003
Sex										
Female	0.496	0.005	0.502	0.005	0.498	0.006	0.500	0.006	0.499	0.005
Immigrant Generational Status										
3rd + Gen.	0.691	0.007	0.695	0.007	0.704	0.008	0.692	0.007	0.694	0.007
2nd/2.5 Gen.	0.111	0.004	0.111	0.004	0.105	0.004	0.110	0.004	0.111	0.004
1.75 Gen.	0.026	0.002	0.026	0.002	0.025	0.002	0.026	0.002	0.026	0.002
1st- Other	0.045	0.003	0.044	0.003	0.042	0.003	0.044	0.003	0.044	0.003
Missing Gen. Status	0.124	0.005	0.122	0.005	0.121	0.005	0.125	0.005	0.122	0.005
Socioeconomic Status										
Base-Year SES Index	-0.008	0.014	-0.005	0.014	0.001	0.014	-0.006	0.014	-0.003	0.014
Family Composition										
Intact	0.568	0.006	0.571	0.006	0.571	0.006	0.569	0.006	0.571	0.006
Stepparent	0.167	0.004	0.166	0.004	0.167	0.004	0.168	0.004	0.167	0.004
Mother Only	0.190	0.004	0.190	0.004	0.187	0.005	0.189	0.005	0.188	0.004
Other Family Composition	0.075	0.003	0.073	0.003	0.076	0.003	0.074	0.003	0.074	0.003

Table 4.1. (Cont'd.)

	Base-Year Sample		Likes School Sample		Coursework Engagement Sample		Coursework Preparation Sample		School-Sponsored Activities Sample	
Independent Variables	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.	Mean	S.E.
Repeated a Grade										
Ever Repeated a Grade	0.103	0.003	0.101	0.003	0.101	0.003	0.100	0.003	0.101	0.003
Repeated a Grade- Missing	0.186	0.005	0.183	0.005	0.182	0.005	0.187	0.005	0.184	0.005
Changed Schools										
Changed Schools Once	0.187	0.004	0.187	0.004	0.189	0.004	0.186	0.004	0.187	0.004
Changed Schools Two or More Times	0.263	0.005	0.262	0.005	0.262	0.005	0.262	0.005	0.263	0.005
Changed Schools- Missing	0.190	0.005	0.186	0.005	0.185	0.006	0.190	0.005	0.187	0.005
School Composition										
Non-Minority Peers (%)	65.4	1.0	65.6	1.0	67.2	1.0	65.7	1.0	65.8	1.0
Same-Race/Ethnicity Peers (%)	63.5	0.7	63.7	0.7	64.1	0.7	63.6	0.7	63.7	0.7
Mean Peer Socioeconomic Status	-0.008	0.014	-0.007	0.014	0.000	0.014	-0.010	0.014	-0.006	0.014
n	16,200		14,690		13,950		14,460		14,950	

Table 4.2. School engagement levels by Student Race/Ethnicity, ELS:2002 Base-Year Cohort

	Likes School			Coursework Engagement			Coursework Preparation			School-Sponsored Activity Involvement		
Racial/Ethnic Group	**Mean**	S.E.	n	**Mean**	S.E.	n	**Mean**	S.E.	n	**Mean**	S.E.	n
Mexican Origin	91.7%	0.8%	1,390	-0.258	0.037	1,290	-0.233	0.039	1,380	33.5%	1.6%	1,420
White	86.9%	0.5%	8,420	0.055	0.016	8,190	0.075	0.014	8,280	53.8%	0.8%	8,580
Black	91.0%	0.8%	1,900	-0.418	0.031	1,770	-0.170	0.029	1,870	45.0%	1.6%	1,930
Asian	91.2%	0.8%	1,360	0.281	0.039	1,180	-0.011	0.038	1,330	56.6%	2.0%	1,370
Latino- Other	88.8%	1.6%	730	-0.339	0.054	670	-0.232	0.045	720	43.1%	2.5%	740
Other Race	85.7%	1.6%	900	-0.276	0.048	840	-0.150	0.048	890	48.6%	2.0%	910
All	88.2%	0.4%	14,690	-0.070	0.014	13,950	-0.024	0.012	14,460	49.7%	0.7%	14,950

Table 4.3. Mexican Origin Student Engagement Levels by School Composition Quartiles, Base-Year ELS:2002

	Percent Non-Minority Quartiles[a]											
	1st			2nd			3rd			4th		
Engagement Measure	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**
Likes School	**94.8%**	0.6%	330	**90.4%**	0.8%	360	**90.9%**	1.6%	310	**90.6%**	1.0%	380
Coursework Engagement	**-0.188**	0.016	270	**-0.262**	0.124	330	**-0.395**	0.064	310	**-0.182**	0.095	380
Coursework Preparation	**-0.224**	0.015	330	**-0.272**	0.065	360	**-0.227**	0.008	320	**-0.210**	0.133	370
Involved in S.S. Activities	**31.6%**	2.7%	340	**28.8%**	4.4%	370	**31.6%**	2.2%	320	**42.0%**	2.4%	390

	Mean SES Quartiles[b]											
	1st			2nd			3rd			4th		
Engagement Measure	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**	**Mean**	**S.E.**	**n**
Likes School	**93.0%**	0.7%	280	**93.6%**	0.3%	370	**88.2%**	0.5%	320	**91.9%**	2.1%	410
Coursework Engagement	**-0.231**	0.136	240	**-0.277**	0.014	340	**-0.431**	0.008	310	**-0.100**	0.116	400
Coursework Preparation	**-0.358**	0.121	280	**-0.173**	0.071	380	**-0.255**	0.011	330	**-0.145**	0.142	390
Involved in S.S. Activities	**28.3%**	3.0%	280	**30.8%**	2.4%	390	**33.2%**	2.3%	340	**42.0%**	2.8%	410

[a]The cut-off points for school percent non-minority quartiles are based on the distribution of Mexican origin youth in ELS:2002 across schools. They are as follows: 1st quartile: 0-12%; 2nd quartile: 13-31%; 3rd quartile: 32-57%; 4th quartile: 58-100%.

[b]The cut-off points for mean school socioeconomic status are as follows: 1st quartile: -1.02 - -.65; 2nd quartile: -.64 - -.39; 3rd quartile: -.38 - -.04; 4th quartile: -.03 - 1.28.

Table 4.4. School Compositional Characteristics as Predictors of Liking School, ELS:2002 Base-Year Sample

	School Racial/Ethnic Composition Models											
	Model 1				Model 2				Model 3			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.993	0.001	0.000	***	0.991	0.003	0.007	**	0.991	0.004	0.011	*
School Mean Socioeconomic Status (SES)									0.991	0.085	0.915	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.785	0.105	0.070		0.839	0.117	0.208	
Black					0.997	0.161	0.985		1.150	0.191	0.400	
Asian					1.038	0.172	0.823		0.827	0.143	0.272	
Other Race					0.768	0.125	0.106		0.829	0.138	0.258	
Latino- Other					0.879	0.164	0.489		0.864	0.163	0.440	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					1.007	0.004	0.064		1.007	0.004	0.086	
School Non-Minority X Black					1.003	0.004	0.550		1.002	0.004	0.731	
School Non-Minority X Asian					1.006	0.005	0.183		1.005	0.005	0.350	
School Non-Minority X Other Race					1.004	0.005	0.394		1.004	0.005	0.366	
School Non-Minority X Latino- Other					1.002	0.005	0.654		1.001	0.005	0.838	
School SES X White												
School SES X Black												
School SES X Asian												
School SES X Other Race												
School SES X Latino- Other												
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									1.938	0.107	0.000	***
(Ref. Male)												
2nd/2.5 Generation									1.263	0.129	0.022	*
1.75 Generation									2.042	0.414	0.000	***
1st/FB Other Generation									2.412	0.428	0.000	***
Missing Gen. Status									1.036	0.126	0.770	
(Ref. 3rd + Generation)												
Base-year SES index									1.169	0.055	0.001	***
Stepparent									0.952	0.073	0.521	
Mother Only									1.014	0.078	0.856	
Other Family									0.881	0.092	0.225	
(Ref. Intact)												
Repeated a grade									0.856	0.078	0.085	
Repeated a grade- Missing									0.624	0.139	0.035	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.950	0.074	0.511	
Changed Schools- 2 or more times									0.896	0.065	0.130	
Changed Schools- Missing									1.145	0.261	0.553	
(Ref. Never changed schools.)												
Constant	8.359	0.259	0.000	***	9.436	1.196	0.000	***	7.038	1.002	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.070				0.070				0.054			
BIC	10228				10306				10211			
n	14,690				14,690				14,690			

*p<.05, **p<.01, ***p<.001

Table 4.4. (Cont'd.)

	School Socioeconomic Status Models											
	Model 4				Model 5				Model 6			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)									0.996	0.001	0.001	**
School Mean Socioeconomic Status (SES)	0.928	0.063	0.272		0.647	0.145	0.052		0.751	0.178	0.227	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.672	0.080	0.001	***	0.827	0.108	0.144	
Black					0.990	0.144	0.946		1.129	0.169	0.416	
Asian					0.987	0.148	0.930		0.809	0.126	0.173	
Other Race					0.718	0.112	0.033	*	0.806	0.128	0.175	
Latino- Other					0.874	0.149	0.431		0.875	0.150	0.436	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White												
School Non-Minority X Black												
School Non-Minority X Asian												
School Non-Minority X Other Race												
School Non-Minority X Latino- Other												
School SES X White					1.931	0.462	0.006	**	1.431	0.354	0.147	
School SES X Black					1.152	0.365	0.655		0.974	0.315	0.934	
School SES X Asian					1.070	0.322	0.823		0.938	0.287	0.834	
School SES X Other Race					2.439	0.869	0.012	*	1.742	0.633	0.127	
School SES X Latino- Other					1.342	0.484	0.416		1.230	0.455	0.576	
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									1.934	0.107	0.000	***
(Ref. Male)												
2nd/2.5 Generation									1.265	0.129	0.021	*
1.75 Generation									2.022	0.408	0.000	***
1st/FB Other Generation									2.378	0.423	0.000	***
Missing Gen. Status									1.047	0.128	0.703	
(Ref. 3rd + Generation)												
Base-year SES index									1.164	0.055	0.001	**
Stepparent									0.952	0.073	0.526	
Mother Only									1.015	0.078	0.852	
Other Family									0.886	0.093	0.248	
(Ref. Intact)												
Repeated a grade									0.854	0.077	0.081	
Repeated a grade- Missing									0.614	0.138	0.030	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.946	0.073	0.476	
Changed Schools- 2 or more times									0.895	0.065	0.124	
Changed Schools- Missing									1.155	0.264	0.527	
(Ref. Never changed schools.)												
Constant	8.356	0.267	0.000	***	10.519	1.208	0.000	***	7.351	0.973	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.109				0.071				0.052			
BIC	10274				10307				10208			
n	14,690				14,690				14,690			

*p<.05, **p<.01, ***p<.001

Table 4.4. (Cont'd.)

	School Racial/Ethnic Composition X School Socioeconomic Status Models											
	Model 7				Model 8				Model 9			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.993	0.001	0.000	***	0.991	0.005	0.046	*	0.991	0.005	0.049	*
School Mean Socioeconomic Status (SES)	1.132	0.083	0.094		0.784	0.249	0.443		0.752	0.243	0.376	
School Non-Minority X Mean SES	1.004	0.003	0.138		0.994	0.008	0.500		0.993	0.008	0.425	
Student Race/Ethnicity												
White					0.784	0.108	0.077		0.836	0.119	0.208	
Black					0.952	0.158	0.766		1.099	0.187	0.579	
Asian					1.171	0.218	0.395		0.943	0.182	0.761	
Other Race					0.752	0.126	0.089		0.810	0.138	0.214	
Latino- Other					0.884	0.179	0.545		0.888	0.182	0.562	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					1.006	0.005	0.243		1.006	0.005	0.213	
School Non-Minority X Black					1.005	0.006	0.429		1.004	0.006	0.457	
School Non-Minority X Asian					1.010	0.006	0.101		1.009	0.006	0.150	
School Non-Minority X Other Race					1.004	0.006	0.480		1.005	0.006	0.371	
School Non-Minority X Latino- Other					0.999	0.007	0.897		0.999	0.007	0.854	
School SES X White					1.764	0.590	0.090		1.500	0.507	0.230	
School SES X Black					1.414	0.597	0.412		1.147	0.488	0.747	
School SES X Asian					0.783	0.318	0.547		0.757	0.310	0.498	
School SES X Other Race					2.415	1.041	0.041	*	1.799	0.781	0.176	
School SES X Latino- Other					1.582	0.782	0.353		1.422	0.710	0.480	
School Non-Minority X School SES X White					1.001	0.009	0.933		1.002	0.009	0.803	
School Non-Minority X School SES X Black					1.016	0.011	0.157		1.014	0.011	0.219	
School Non-Minority X School SES X Asian					0.997	0.011	0.802		0.999	0.011	0.898	
School Non-Minority X School SES X Other Race					1.019	0.013	0.143		1.017	0.013	0.181	
School Non-Minority X School SES X Latino- Other					0.999	0.013	0.966		0.998	0.013	0.904	
Controls:												
Female									1.930	0.107	0.000	***
(Ref. Male)												
2nd/2.5 Generation									1.255	0.128	0.027	*
1.75 Generation									1.977	0.401	0.001	***
1st/FB Other Generation									2.350	0.418	0.000	***
Missing Gen. Status									1.045	0.127	0.715	
(Ref. 3rd + Generation)												
Base-year SES index									1.169	0.055	0.001	***
Stepparent									0.952	0.073	0.525	
Mother Only									1.010	0.078	0.902	
Other Family									0.883	0.093	0.236	
(Ref. Intact)												
Repeated a grade									0.856	0.078	0.087	
Repeated a grade- Missing									0.618	0.138	0.032	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.950	0.074	0.505	
Changed Schools- 2 or more times									0.898	0.065	0.139	
Changed Schools- Missing									1.149	0.262	0.543	
(Ref. Never changed schools.)												
Constant	8.178	0.275	0.000	***	9.498	1.234	0.000	***	7.167	1.038	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.065				0.061				0.052			
BIC	10242				10398				10305			
n	14,690				14,690				14,690			

*p<.05, **p<.01, ***p<.001

Table 4.5. School Compositional Characteristics as Predictors of Coursework Engagement, ELS:2002 Base-Year Sample

	School Racial/Ethnic Composition Models											
	Model 1				Model 2				Model 3			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.004	0.000	0.000	***	0.002	0.001	0.060		0.000	0.001	0.784	
School Mean Socioeconomic Status (SES)									0.043	0.030	0.153	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.241	0.040	0.000	***	0.169	0.040	0.000	***
Black					-0.108	0.048	0.025	*	-0.033	0.047	0.485	
Asian					0.530	0.050	0.000	***	0.415	0.048	0.000	***
Other Race					0.034	0.051	0.503		0.043	0.048	0.370	
Latino- Other					-0.017	0.057	0.761		-0.023	0.054	0.668	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.000	0.001	0.984		0.001	0.001	0.387	
School Non-Minority X Black					0.000	0.001	0.828		0.001	0.001	0.565	
School Non-Minority X Asian					0.000	0.001	0.936		0.000	0.001	0.878	
School Non-Minority X Other Race					-0.001	0.001	0.463		0.000	0.001	0.922	
School Non-Minority X Latino- Other					0.002	0.002	0.277		0.001	0.002	0.501	
School SES X White												
School SES X Black												
School SES X Asian												
School SES X Other Race												
School SES X Latino- Other												
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									0.409	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.063	0.028	0.025	*
1.75 Generation									0.077	0.047	0.103	
1st/FB Other Generation									0.205	0.040	0.000	***
Missing Gen. Status									-0.131	0.038	0.001	***
(Ref. 3rd + Generation)												
Base-year SES index									0.186	0.013	0.000	***
Stepparent									-0.157	0.023	0.000	***
Mother Only									-0.150	0.022	0.000	***
Other Family									-0.151	0.031	0.000	***
(Ref. Intact)												
Repeated a grade									-0.342	0.027	0.000	***
Repeated a grade- Missing									-0.034	0.066	0.605	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.035	0.022	0.114	
Changed Schools- 2 or more times									-0.105	0.021	0.000	***
Changed Schools- Missing									-0.211	0.066	0.001	**
(Ref. Never changed schools.)												
Coursework Engagement Index- # of Measures	0.035	0.005	0.000	***	0.033	0.005	0.000	***	0.027	0.005	0.000	***
Constant	-0.246	0.039	0.000	***	-0.405	0.053	0.000	***	-0.362	0.054	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.054				0.048				0.036			
Residual	0.925				0.903				0.810			
Intraclass Correlation Coefficient	0.055				0.051				0.043			
BIC	39082				38817				37387			
n	13,950				13,950				13,950			

*p<.05, **p<.01, ***p<.001

Table 4.5. (Cont'd.)

	School Socioeconomic Status Models											
	Model 4				Model 5				Model 6			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)									0.001	0.000	0.036	*
School Mean Socioeconomic Status (SES)	0.372	0.026	0.000	***	0.241	0.068	0.000	***	0.058	0.068	0.395	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.231	0.036	0.000	***	0.152	0.037	0.000	***
Black					-0.120	0.043	0.005	**	-0.052	0.042	0.213	
Asian					0.498	0.045	0.000	***	0.404	0.044	0.000	***
Other Race					0.020	0.048	0.670		0.024	0.046	0.595	
Latino- Other					-0.066	0.051	0.195		-0.048	0.049	0.324	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White												
School Non-Minority X Black												
School Non-Minority X Asian												
School Non-Minority X Other Race												
School Non-Minority X Latino- Other												
School SES X White					0.062	0.073	0.392		-0.001	0.071	0.985	
School SES X Black					0.084	0.093	0.366		-0.007	0.089	0.937	
School SES X Asian					-0.085	0.091	0.346		-0.133	0.087	0.123	
School SES X Other Race					0.104	0.109	0.339		-0.034	0.104	0.742	
School SES X Latino- Other					0.108	0.110	0.326		0.017	0.105	0.874	
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									0.409	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.065	0.028	0.022	*
1.75 Generation									0.077	0.047	0.101	
1st/FB Other Generation									0.204	0.040	0.000	***
Missing Gen. Status									-0.128	0.038	0.001	***
(Ref. 3rd + Generation)												
Base-year SES index									0.186	0.013	0.000	***
Stepparent									-0.158	0.023	0.000	***
Mother Only									-0.149	0.022	0.000	***
Other Family									-0.151	0.031	0.000	***
(Ref. Intact)												
Repeated a grade									-0.342	0.027	0.000	***
Repeated a grade- Missing									-0.035	0.066	0.595	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.035	0.022	0.116	
Changed Schools- 2 or more times									-0.105	0.021	0.000	***
Changed Schools- Missing									-0.212	0.066	0.001	**
(Ref. Never changed schools.)												
Coursework Engagement Index- # of Measures	0.036	0.005	0.000	***	0.032	0.005	0.000	***	0.027	0.005	0.000	***
Constant	-0.253	0.038	0.000	***	-0.385	0.050	0.000	***	-0.341	0.052	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.042				0.037				0.037			
Residual	0.925				0.903				0.810			
Intraclass Correlation Coefficient	0.043				0.039				0.043			
BIC	39001				38724				37384			
n	13,950				13,950				13,950			

*p<.05, **p<.01, ***p<.001

Table 4.5. (Cont'd.)

	School Racial/Ethnic Composition X School Socioeconomic Status Models											
	Model 7				Model 8				Model 9			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.002	0.000	0.000	***	0.000	0.001	0.842		0.000	0.001	0.860	
School Mean Socioeconomic Status (SES)	0.306	0.028	0.000	***	0.280	0.097	0.004	**	0.096	0.093	0.305	
School Non-Minority X Mean SES	0.001	0.001	0.146		0.002	0.002	0.402		0.000	0.002	0.949	
Student Race/Ethnicity												
White					0.229	0.041	0.000	***	0.161	0.040	0.000	***
Black					-0.113	0.049	0.021	*	-0.037	0.048	0.437	
Asian					0.515	0.053	0.000	***	0.423	0.052	0.000	***
Other Race					0.029	0.052	0.580		0.046	0.050	0.350	
Latino- Other					-0.102	0.062	0.099		-0.085	0.059	0.146	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.001	0.002	0.691		0.002	0.001	0.270	
School Non-Minority X Black					0.000	0.002	0.820		0.001	0.002	0.463	
School Non-Minority X Asian					0.001	0.002	0.460		0.002	0.002	0.280	
School Non-Minority X Other Race					-0.001	0.002	0.658		0.000	0.002	0.791	
School Non-Minority X Latino- Other					0.003	0.002	0.112		0.003	0.002	0.154	
School SES X White					0.007	0.101	0.948		-0.054	0.096	0.576	
School SES X Black					0.046	0.125	0.712		-0.046	0.119	0.701	
School SES X Asian					-0.150	0.121	0.216		-0.175	0.115	0.129	
School SES X Other Race					0.073	0.131	0.576		-0.066	0.125	0.595	
School SES X Latino- Other					0.098	0.150	0.514		0.060	0.143	0.677	
School Non-Minority X School SES X White					-0.001	0.003	0.765		0.001	0.003	0.660	
School Non-Minority X School SES X Black					0.000	0.003	0.908		0.000	0.003	0.992	
School Non-Minority X School SES X Asian					0.000	0.003	0.966		0.001	0.003	0.693	
School Non-Minority X School SES X Other Race					-0.003	0.004	0.491		-0.003	0.004	0.467	
School Non-Minority X School SES X Latino- Other					0.010	0.004	0.015	*	0.010	0.004	0.012	*
Controls:												
Female									0.410	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.063	0.028	0.025	*
1.75 Generation									0.073	0.047	0.120	
1st/FB Other Generation									0.198	0.041	0.000	***
Missing Gen. Status									-0.129	0.038	0.001	***
(Ref. 3rd + Generation)												
Base-year SES index									0.185	0.013	0.000	***
Stepparent									-0.157	0.023	0.000	***
Mother Only									-0.149	0.022	0.000	***
Other Family									-0.152	0.031	0.000	***
(Ref. Intact)												
Repeated a grade									-0.341	0.027	0.000	***
Repeated a grade- Missing									-0.035	0.066	0.602	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.035	0.022	0.117	
Changed Schools- 2 or more times									-0.105	0.021	0.000	***
Changed Schools- Missing									-0.213	0.066	0.001	**
(Ref. Never changed schools.)												
Coursework Engagement Index- # of Measures	0.032	0.005	0.000	***	0.031	0.005	0.000	***	0.026	0.005	0.000	***
Constant	-0.239	0.039	0.000	***	-0.392	0.053	0.000	***	-0.358	0.054	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.038				0.036				0.037			
Residual	0.925				0.902				0.809			
Intraclass Correlation Coefficient	0.040				0.039				0.043			
BIC	38990				38820				37476			
n	13,950				13,950				13,950			

*p<.05, **p<.01, ***p<.001

Table 4.6. School Compositional Characteristics as Predictors of Coursework Preparation, ELS:2002 Base-Year Sample

	School Racial/Ethnic Composition Models											
	Model 1				Model 2				Model 3			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.003	0.000	0.000	***	0.002	0.001	0.041	*	0.002	0.001	0.124	
School Mean Socioeconomic Status (SES)									-0.009	0.027	0.731	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.216	0.041	0.000	***	0.177	0.042	0.000	***
Black					0.019	0.049	0.704		0.044	0.049	0.369	
Asian					0.146	0.050	0.004	**	0.131	0.051	0.010	*
Other Race					0.044	0.051	0.395		0.039	0.051	0.440	
Latino- Other					0.013	0.058	0.828		0.012	0.057	0.831	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.000	0.001	0.990		0.000	0.001	0.880	
School Non-Minority X Black					-0.001	0.001	0.379		-0.001	0.001	0.366	
School Non-Minority X Asian					-0.002	0.001	0.097		-0.002	0.001	0.093	
School Non-Minority X Other Race					0.002	0.001	0.204		0.002	0.001	0.146	
School Non-Minority X Latino- Other					0.001	0.002	0.421		0.001	0.002	0.610	
School SES X White												
School SES X Black												
School SES X Asian												
School SES X Other Race												
School SES X Latino- Other												
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									0.234	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.030	0.029	0.303	
1.75 Generation									-0.014	0.048	0.765	
1st/FB Other Generation									-0.065	0.041	0.119	
Missing Gen. Status									0.018	0.039	0.650	
(Ref. 3rd + Generation)												
Base-year SES index									0.069	0.014	0.000	***
Stepparent									-0.037	0.024	0.125	
Mother Only									-0.105	0.023	0.000	***
Other Family									-0.067	0.033	0.043	*
(Ref. Intact)												
Repeated a grade									-0.149	0.029	0.000	***
Repeated a grade- Missing									-0.120	0.069	0.083	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.042	0.023	0.070	
Changed Schools- 2 or more times									-0.019	0.022	0.389	
Changed Schools- Missing									-0.039	0.069	0.576	
(Ref. Never changed schools.)												
Coursework Preparation Index- # of Measures	0.189	0.050	0.000	***	0.179	0.050	0.000	***	0.160	0.050	0.001	**
Constant	-0.565	0.150	0.000	***	-0.682	0.154	0.000	***	-0.642	0.154	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.016				0.015				0.013			
Residual	0.971				0.965				0.943			
Intraclass Correlation Coefficient												
BIC	40855				40849				40634			
n	14,460				14,460				14,460			

*p<.05, **p<.01, ***p<.001

Table 4.6. (Cont'd.)

	School Socioeconomic Status Models											
	Model 4				Model 5				Model 6			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)									0.001	0.000	0.003	**
School Mean Socioeconomic Status (SES)	0.178	0.023	0.000	***	0.153	0.064	0.018	*	0.050	0.067	0.456	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					0.250	0.036	0.000	***	0.179	0.039	0.000	***
Black					0.023	0.043	0.589		0.048	0.043	0.268	
Asian					0.162	0.044	0.000	***	0.156	0.045	0.000	***
Other Race					0.035	0.048	0.456		0.019	0.048	0.696	
Latino- Other					-0.021	0.051	0.678		-0.010	0.050	0.840	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White												
School Non-Minority X Black												
School Non-Minority X Asian												
School Non-Minority X Other Race												
School Non-Minority X Latino- Other												
School SES X White					-0.098	0.070	0.166		-0.097	0.071	0.170	
School SES X Black					-0.062	0.091	0.496		-0.105	0.090	0.246	
School SES X Asian					0.012	0.088	0.890		-0.007	0.087	0.932	
School SES X Other Race					0.088	0.108	0.417		0.044	0.108	0.680	
School SES X Latino- Other					0.097	0.106	0.361		0.056	0.105	0.594	
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									0.235	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.027	0.029	0.361	
1.75 Generation									-0.021	0.048	0.663	
1st/FB Other Generation									-0.063	0.041	0.126	
Missing Gen. Status									0.014	0.039	0.712	
(Ref. 3rd + Generation)												
Base-year SES index									0.068	0.014	0.000	***
Stepparent									-0.037	0.024	0.116	
Mother Only									-0.107	0.023	0.000	***
Other Family									-0.067	0.033	0.041	*
(Ref. Intact)												
Repeated a grade									-0.151	0.029	0.000	***
Repeated a grade- Missing									-0.118	0.069	0.088	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.043	0.023	0.064	
Changed Schools- 2 or more times									-0.019	0.022	0.385	
Changed Schools- Missing									-0.038	0.069	0.579	
(Ref. Never changed schools.)												
Coursework Preparation Index- # of Measures	0.199	0.050	0.000	***	0.177	0.050	0.000	***	0.157	0.050	0.002	**
Constant	-0.591	0.151	0.000	***	-0.684	0.153	0.000	***	-0.622	0.153	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.021				0.014				0.012			
Residual	0.972				0.966				0.944			
Intraclass Correlation Coefficient												
BIC	40914				40853				40639			
n	14,460				14,460				14,460			

*p<.05, **p<.01, ***p<.001

Table 4.6. (Cont'd.)

	School Racial/Ethnic Composition X School Socioeconomic Status Models											
	Model 7				Model 8				Model 9			
Fixed Effects	Coeff.	S.E.	p-value		Coeff.	S.E.	p-value		Coeff.	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	0.003	0.000	0.000	***	0.001	0.001	0.321		0.001	0.001	0.464	
School Mean Socioeconomic Status (SES)	0.088	0.024	0.000	***	0.145	0.097	0.136		0.067	0.097	0.491	
School Non-Minority X Mean SES	-0.001	0.001	0.218		0.001	0.002	0.591		0.000	0.002	0.931	
Student Race/Ethnicity												
White					0.216	0.041	0.000	***	0.179	0.042	0.000	***
Black					0.018	0.050	0.713		0.046	0.050	0.359	
Asian					0.089	0.053	0.096		0.079	0.054	0.145	
Other Race					0.047	0.052	0.371		0.045	0.052	0.390	
Latino- Other					-0.019	0.062	0.756		-0.011	0.062	0.854	
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.000	0.001	0.749		0.001	0.001	0.569	
School Non-Minority X Black					-0.001	0.002	0.553		-0.001	0.002	0.677	
School Non-Minority X Asian					-0.003	0.002	0.049	*	-0.003	0.002	0.086	
School Non-Minority X Other Race					0.002	0.002	0.322		0.002	0.002	0.206	
School Non-Minority X Latino- Other					0.001	0.002	0.732		0.001	0.002	0.796	
School SES X White					-0.090	0.103	0.379		-0.106	0.102	0.298	
School SES X Black					-0.084	0.127	0.508		-0.112	0.126	0.371	
School SES X Asian					0.137	0.123	0.267		0.130	0.122	0.286	
School SES X Other Race					0.014	0.133	0.917		-0.033	0.132	0.803	
School SES X Latino- Other					0.046	0.152	0.761		0.047	0.150	0.753	
School Non-Minority X School SES X White					-0.002	0.003	0.387		-0.001	0.003	0.652	
School Non-Minority X School SES X Black					-0.002	0.003	0.532		-0.002	0.003	0.623	
School Non-Minority X School SES X Asian					0.002	0.003	0.476		0.004	0.003	0.255	
School Non-Minority X School SES X Other Race					-0.003	0.004	0.378		-0.003	0.004	0.431	
School Non-Minority X School SES X Latino- Other					0.001	0.004	0.893		0.001	0.004	0.797	
Controls:												
Female									0.235	0.016	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.031	0.029	0.297	
1.75 Generation									-0.006	0.048	0.900	
1st/FB Other Generation									-0.060	0.042	0.152	
Missing Gen. Status									0.014	0.039	0.722	
(Ref. 3rd + Generation)												
Base-year SES index									0.069	0.014	0.000	***
Stepparent									-0.038	0.024	0.108	
Mother Only									-0.106	0.023	0.000	***
Other Family									-0.068	0.033	0.040	*
(Ref. Intact)												
Repeated a grade									-0.150	0.029	0.000	***
Repeated a grade- Missing									-0.118	0.069	0.088	
(Ref. Never repeated a grade)												
Changed Schools- 1 time									-0.042	0.023	0.072	
Changed Schools- 2 or more times									-0.018	0.022	0.397	
Changed Schools- Missing									-0.037	0.069	0.587	
(Ref. Never changed schools.)												
Coursework Preparation Index- # of Measures	0.187	0.050	0.000	***	0.177	0.050	0.000	***	0.159	0.050	0.001	**
Constant	-0.552	0.150	0.000	***	-0.672	0.154	0.000	***	-0.634	0.154	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.015				0.013				0.012			
Residual	0.971				0.965				0.943			
Intraclass Correlation Coefficient												
BIC	40860				40941				40725			
n	14,460				14,460				14,460			

*p<.05, **p<.01, ***p<.001

Table 4.7. School Compositional Characteristics as Predictors of Involvement in School-Sponsored Activities, ELS:2002 Base-Year Sample

	School Racial/Ethnic Composition Models											
	Model 1				Model 2				Model 3			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	1.007	0.001	0.000	***	1.008	0.002	0.000	***	1.004	0.002	0.072	
School Mean Socioeconomic Status (SES)									1.146	0.082	0.058	
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					1.697	0.149	0.000	***	1.342	0.125	0.002	**
Black					1.253	0.131	0.031	*	1.222	0.134	0.068	
Asian					2.217	0.238	0.000	***	2.067	0.236	0.000	***
Other Race					1.546	0.169	0.000	***	1.437	0.163	0.001	**
Latino- Other					1.393	0.172	0.007	**	1.344	0.171	0.020	*
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.996	0.003	0.163		0.999	0.003	0.690	
School Non-Minority X Black					0.994	0.003	0.032	*	0.996	0.003	0.115	
School Non-Minority X Asian					0.995	0.003	0.115		0.996	0.003	0.168	
School Non-Minority X Other Race					0.993	0.003	0.033	*	0.996	0.003	0.188	
School Non-Minority X Latino- Other					0.996	0.003	0.270		0.995	0.003	0.161	
School SES X White												
School SES X Black												
School SES X Asian												
School SES X Other Race												
School SES X Latino- Other												
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									2.342	0.086	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.855	0.056	0.016	*
1.75 Generation									0.906	0.098	0.364	
1st/FB Other Generation									0.930	0.086	0.432	
Missing Gen. Status									0.819	0.071	0.021	*
(Ref. 3rd + Generation)												
Base-year SES index									1.537	0.047	0.000	***
Stepparent									0.781	0.041	0.000	***
Mother Only									0.871	0.044	0.006	**
Other Family									0.829	0.060	0.009	**
(Ref. Intact)												
Repeated a grade									0.803	0.051	0.001	***
Repeated a grade- Missing									0.678	0.103	0.011	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.907	0.046	0.057	
Changed Schools- 2 or more times									0.893	0.043	0.018	*
Changed Schools- Missing									1.120	0.170	0.454	
(Ref. Never changed schools.)												
Constant	1.114	0.029	0.000	***	0.709	0.060	0.000	***	0.679	0.066	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.282				0.260				0.227			
BIC	20248				20213				19373			
n	14,950				14,950				14,950			

*p<.05, **p<.01, ***p<.001

Table 4.7. (Cont'd.)

	School Socioeconomic Status Models											
	Model 4				Model 5				Model 6			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)									1.002	0.001	0.107	
School Mean Socioeconomic Status (SES)	2.033	0.118	0.000	***	2.090	0.312	0.000	***	1.420	0.231	0.031	*
School Non-Minority X Mean SES												
Student Race/Ethnicity												
White					1.775	0.139	0.000	***	1.387	0.121	0.000	***
Black					1.287	0.119	0.006	**	1.236	0.122	0.031	*
Asian					2.209	0.211	0.000	***	2.132	0.217	0.000	***
Other Race					1.596	0.163	0.000	***	1.460	0.156	0.000	***
Latino- Other					1.386	0.151	0.003	**	1.397	0.158	0.003	**
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White												
School Non-Minority X Black												
School Non-Minority X Asian												
School Non-Minority X Other Race												
School Non-Minority X Latino- Other												
School SES X White					0.861	0.138	0.350		0.812	0.137	0.218	
School SES X Black					0.640	0.128	0.026	*	0.610	0.127	0.018	*
School SES X Asian					0.917	0.181	0.661		0.855	0.175	0.446	
School SES X Other Race					0.913	0.216	0.701		0.808	0.198	0.383	
School SES X Latino- Other					0.798	0.183	0.326		0.726	0.172	0.177	
School Non-Minority X School SES X White												
School Non-Minority X School SES X Black												
School Non-Minority X School SES X Asian												
School Non-Minority X School SES X Other Race												
School Non-Minority X School SES X Latino- Other												
Controls:												
Female									2.346	0.086	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.861	0.056	0.021	*
1.75 Generation									0.908	0.098	0.374	
1st/FB Other Generation									0.941	0.087	0.509	
Missing Gen. Status									0.820	0.071	0.021	*
(Ref. 3rd + Generation)												
Base-year SES index									1.532	0.047	0.000	***
Stepparent									0.780	0.041	0.000	***
Mother Only									0.868	0.044	0.005	**
Other Family									0.829	0.060	0.009	**
(Ref. Intact)												
Repeated a grade									0.799	0.051	0.000	***
Repeated a grade- Missing									0.679	0.104	0.011	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.906	0.046	0.053	
Changed Schools- 2 or more times									0.894	0.043	0.019	*
Changed Schools- Missing									1.120	0.170	0.456	
(Ref. Never changed schools.)												
Constant	1.114	0.028	0.000	***	0.687	0.052	0.000	***	0.673	0.061	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.230				0.211				0.226			
BIC	20170				20140				19372			
n	14,950				14,950				14,950			

*p<.05, **p<.01, ***p<.001

Table 4.7. (Cont'd.)

	School Racial/Ethnic Composition X School Socioeconomic Status Models											
	Model 7				Model 8				Model 9			
Fixed Effects	Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value		Odds Ratio	S.E.	p-value	
School Compositional Characteristics												
School Non-Minority (%)	1.002	0.001	0.015	*	1.002	0.003	0.487		1.001	0.003	0.791	
School Mean Socioeconomic Status (SES)	1.862	0.119	0.000	***	1.732	0.369	0.010	**	1.178	0.261	0.459	
School Non-Minority X Mean SES	0.997	0.002	0.147		0.996	0.005	0.471		0.992	0.006	0.172	
Student Race/Ethnicity												
White					1.677	0.149	0.000	***	1.337	0.127	0.002	**
Black					1.207	0.128	0.077		1.175	0.132	0.150	
Asian					1.978	0.225	0.000	***	1.903	0.231	0.000	***
Other Race					1.512	0.168	0.000	***	1.416	0.163	0.003	**
Latino- Other					1.356	0.178	0.021	*	1.350	0.184	0.027	*
(Ref. Mexican Origin)												
School Composition X Student Race/Ethnicity												
School Non-Minority X White					0.999	0.003	0.870		1.002	0.003	0.597	
School Non-Minority X Black					0.999	0.004	0.816		1.001	0.004	0.775	
School Non-Minority X Asian					0.996	0.004	0.341		0.998	0.004	0.590	
School Non-Minority X Other Race					0.997	0.004	0.415		0.999	0.004	0.763	
School Non-Minority X Latino- Other					0.999	0.005	0.782		0.998	0.005	0.650	
School SES X White		1.153			1.103	0.244	0.659		1.046	0.240	0.845	
School SES X Black		0.866			0.829	0.226	0.492		0.799	0.225	0.425	
School SES X Asian		1.214			1.268	0.340	0.377		1.236	0.343	0.444	
School SES X Other Race		1.147			1.127	0.320	0.673		1.002	0.294	0.995	
School SES X Latino- Other		1.031			0.899	0.289	0.740		0.913	0.303	0.785	
School Non-Minority X School SES X White					0.998	0.006	0.730		1.001	0.007	0.849	
School Non-Minority X School SES X Black					1.009	0.007	0.196		1.011	0.007	0.117	
School Non-Minority X School SES X Asian					1.010	0.008	0.206		1.013	0.008	0.085	
School Non-Minority X School SES X Other Race					1.004	0.008	0.593		1.005	0.008	0.570	
School Non-Minority X School SES X Latino- Other					1.002	0.008	0.823		1.003	0.009	0.761	
Controls:												
Female									2.346	0.086	0.000	***
(Ref. Male)												
2nd/2.5 Generation									0.859	0.056	0.020	*
1.75 Generation									0.917	0.100	0.424	
1st/FB Other Generation									0.938	0.087	0.493	
Missing Gen. Status									0.818	0.071	0.020	*
(Ref. 3rd + Generation)												
Base-year SES index									1.537	0.047	0.000	***
Stepparent									0.778	0.041	0.000	***
Mother Only									0.866	0.044	0.004	**
Other Family									0.830	0.060	0.010	**
(Ref. Intact)												
Repeated a grade									0.801	0.051	0.000	***
Repeated a grade- Missing									0.678	0.103	0.011	*
(Ref. Never repeated a grade)												
Changed Schools- 1 time									0.907	0.046	0.056	
Changed Schools- 2 or more times									0.895	0.043	0.021	*
Changed Schools- Missing									1.124	0.171	0.442	
(Ref. Never changed schools.)												
Constant	1.132	0.031	0.000	***	0.721	0.061	0.000	***	0.695	0.068	0.000	***
Random Effects	Est.				Est.				Est.			
Intercept (School)	0.221				0.210				0.223			
BIC	20176				20244				19466			
n	14,950				14,950				14,950			

*p<.05, **p<.01, ***p<.001

CHAPTER 5: CONCLUSION

I. SUMMARY OF FINDINGS

In this dissertation, I have investigated the interplay between school racial/ethnic and socioeconomic composition and the educational outcomes of Mexican origin youth. I have used the ELS:2002 to investigate the determinants of school racial/ethnic and socioeconomic composition among Mexican origin youth and to evaluate how school racial/ethnic and socioeconomic compositional characteristics influence Mexican origin patterns of dropout and school engagement. I briefly highlight my key findings from each analysis below. I then discuss the implications of my findings for the literatures on educational stratification and assimilation among Mexican origin youth. I conclude with a discussion of the limitations of this analysis and my plans for future research.

The Racial/Ethnic and Socioeconomic Composition of Peers in Schools Attended by Mexican Origin Youth

In the second chapter of the dissertation, I demonstrate that Mexican origin youth are highly isolated in schools with minority, Latino/a, and socioeconomically disadvantaged peers. I evaluate whether Mexican origin youth experience assimilation across schooling contexts, or rather whether they are unable to enroll in more integrated schools due to mechanisms of racial stratification.

I find some support for the assimilation perspective in explaining Mexican origin school compositional characteristics. Levels of racial/ethnic and socioeconomic isolation are less pronounced among Mexican origin youth with U.S.-born parents—the third and higher generation. However, even this Mexican origin subgroup has gaps in exposure to non-minority and non-poor students with third and higher generation white students, even after accounting for

differences in household resources and the racial/ethnic and socioeconomic composition of the local community.

Mexican origin students whose families have greater socioeconomic resources also attend schools with lower concentrations of minority, Latino/a, and socioeconomically disadvantaged students. However, even middle- and high-socioeconomic status (SES) Mexican origin youth have wide gaps in their exposure to non-minority students relative to low-SES NL white students, even net of background controls variables. Additionally, Mexican origin youth attend schools with higher minority concentrations and lower average peer SES levels than white students with comparable household SES levels.

In sum, my overall findings partially support the assimilation hypothesis, but also show that Mexican origin youth exhibit "weak" racial stratification in schools (Logan and Alba 1993). Socioeconomic and spatial assimilation facilitates Mexican origin enrollment in less minority and socioeconomically isolated schools. However, Mexican origin youth would need to experience greater levels of socioeconomic or spatial assimilation with each immigrant generation, and/or would need to receive even higher returns to increases in household socioeconomic resources, in order to close gaps in school racial/ethnic and socioeconomic composition with white students.

School Racial/Ethnic and Socioeconomic Composition as Predictors of Dropout Among Mexican Origin Youth

In the third of the dissertation, I explore whether the racial/ethnic and socioeconomic composition of peers in schools are related to patterns of dropout among Mexican origin youth. I assess the role that school composition plays in explaining differences in the likelihood of dropout within the Mexican origin population. I investigate whether the risk of dropout declines as Mexican origin youth gain increasing exposure to non-minority and non-poor students in

schools. Additionally, I evaluate whether Mexican origin youth are more vulnerable to school compositional influences on their risk of dropout, as posited by the segmented assimilation theory (Portes and Rumbaut 2001) and the "double disadvantage" hypothesis (Crosnoe 2005).

I show that Mexican origin youth in ELS:2002 are over twice as likely to drop out of school relative to white youth between 10th and 12th grades. In the bivariate context, Mexican origin students that have greater exposure to non-minority and non-poor youth are less likely to drop out of school than their peers. However, Mexican origin youth that attend less racially/ethnically and socioeconomically isolated schools are more selective than their peers on measures of household socioeconomic resources and academic risk factors including repeating a grade and 10th grade achievement. These factors explain why exposure to non-minority and non-poor youth is negatively correlated with dropout among Mexican origin youth.

I do not find that the net relationship between school composition and dropout does differs significantly for Mexican origin youth relative to this association for other racial/ethnic groups. In other words, Mexican origin youth are not more susceptible to school compositional influences on their risk of dropout relative to their peers.

I find little evidence to support theories of immigrant assimilation and educational stratification that argue that isolation in high-minority, high-poverty schooling contexts are to blame for adverse educational outcomes among Mexican origin youth (Crosnoe 2005; Portes and Rumbaut 2001). Furthermore, my analysis of data from the ELS:2002 does not corroborate the finding from Portes and Hao's study (2004) showing that Mexican origin youth have a greater net risk of dropout as they gain exposure to more socioeconomically advantaged students. Instead, my results demonstrate that low levels of household socioeconomic resources and disadvantaged academic trajectories largely influence the process of dropout among Mexican origin youth.

School Racial/Ethnic and Socioeconomic Composition as Predictors of School Engagement Among Mexican Origin Youth

In the fourth chapter of the dissertation, I investigate the relationship between school composition and school engagement patterns among Mexican origin youth. I test the "school isolation paradox" hypothesis, which proposes that Mexican origin school engagement levels will decrease as these students gain increasing exposure to non-minority and socioeconomically advantaged youth. I focus on four school engagement outcomes: Liking school, coursework engagement, coursework preparation, and school-sponsored activities engagement.

For Mexican origin youth, school composition is not significantly related to measures of engagement including coursework engagement and coursework preparation, net of background confounders related to selection into schools and engagement. However, school racial/ethnic composition is significantly related to Mexican origin student feelings towards school and their involvement in school-sponsored activities. Mexican origin youth are less likely to state that they like school with increasing exposure to non-minority students. However, they are more involved in schools with higher SES peers. Both of these relationships persist even after controlling for background characteristics related to engagement. Thus, there is an affective-behavioral engagement trade-off for Mexican origin youth attending less racially/ethnically and socioeconomically isolated schools.

II. IMPLICATIONS OF DISSERTATION FINDINGS

This dissertation contributes to research on educational stratification and assimilation patterns among Mexican origin youth. I have focused on school composition as a factor that could potentially influence the educational trajectories of Mexican origin youth. Theoretical frameworks such as segmented assimilation (Portes and Rumbaut 2001; Portes and Zhou 1993;

Zhou 1997a, 1997b) or racialization (Massey 2007; Telles and Ortiz 2008) propose that Mexican origin youth and their descendants are on a downward socioeconomic trajectory into a racialized underclass. In contrast, classical (Warner and Srole 1945) and "updated" classical (Alba and Nee 2009) theories of assimilation argue that Mexican origin youth should be making steady educational progress with each generation and will eventually achieve socioeconomic parity with mainstream society.

My research validates concerns about the educational pathways of Mexican origin youth. Mexican origin youth are more racially/ethnically and socioeconomically isolated in schools than their peers. Mexican origin students have higher levels of dropout and lower levels of behavioral engagement in schools than their peers. However, Mexican origin youth show some signs of educational success according to key measures of assimilation. Third and higher generation Mexican origin youth, as well as those with greater socioeconomic resources, attend less racially/ethnically and socioeconomically isolated schools than those with immigrant parents and those in socioeconomically poor households. Mexican origin youth whose families have greater socioeconomic resources and whom have fewer academic risk factors both attend more racially/ethnically and socioeconomically integrated schools and have a lower likelihood of dropout. Mexican origin youth who are able to enroll in higher SES schools also experience higher levels of involvement in school-sponsored activities.

Thus, my research points to instances of educational segmentation *within* the Mexican origin adolescent population, by school composition and by other background characteristics that are relevant to the process of assimilation such as immigrant generational status and household socioeconomic resources. My findings are more closely aligned with prior research showing that Mexican origin patterns of incorporation are heterogeneous, and cannot be characterized under

one monolithic framework of assimilation (Alba et al. 2013). Subgroups within the Mexican origin population do appear to be experiencing a degree of educational assimilation according to the schools that they attend, their dropout patterns, and their engagement patterns, but not enough to close gaps with the majority white population.

In addition to contributing to the literature on immigrant assimilation, I have sought to provide insight into the literatures on school and neighborhood effects by determining whether racial/ethnic and socioeconomic isolation in schools is harmful, helpful, or unrelated to Mexican origin schooling outcomes. There are three sets of hypotheses regarding the potential influence of school composition on Mexican origin student outcomes. Isolation in high-minority, high-poverty schools may be harmful for Mexican origin students, due to a lack of institutional resources and peer and parental support for positive educational attainment outcomes (Jencks and Mayer 1990). However, Mexican origin youth may have more difficult experiences in schools with higher concentration of white and non-poor students if these schooling environments engender relative deprivation, cultural conflict, negative competition, or stereotype threat (Jencks and Mayer 1990; Steele 1997). Finally, school composition may be unrelated to Mexican origin educational outcomes, due to mechanisms of student selection into schools (Lauen and Gaddis 2013).

My findings provide support for all three sets of hypotheses. Mexican origin dropout patterns are unrelated to school compositional factors once factors related to selection into schools and prior educational history are taken into account, thus supporting the "selection into schools" argument. However, Mexican origin youth are more engaged in school-sponsored activities as they gain exposure to socioeconomically advantaged students. Additionally, Mexican origin youth are less likely to report that they like school as they gain exposure to non-

minority and higher SES students, net of background controls. In other words, there is not a straightforward relationship between school composition and Mexican origin educational and psychosocial outcomes.

Importantly, the bulk of my research shows that social origins and prior academic trajectories are key determinants of educational gaps within the Mexican origin population and between Mexican origin youth and their peers. Mexican origin youth are extremely socioeconomically disadvantaged relative to peers, and household socioeconomic status is predictive of nearly every outcome in my analysis. Additionally, Mexican origin youth are more likely to have repeated a grade and have lower levels of achievement in 10th grade relative to white students. Experiences such as repeating a grade or having low levels of achievement significantly impact Mexican origin educational outcomes such as dropout and behavioral engagement in schools. In sum, Mexican origin youth are being brought into the fold of educational stratification in the U.S., where social origins and educational developmental pathways are instrumental in shaping patterns of educational inequality.

III. LIMITATIONS

The main limitations of this dissertation research involve the use of the Educational Longitudinal Study of 2002 (ELS:2002) dataset, the use of quantitative methods to evaluate the relationship between school composition and Mexican origin student outcomes, and the correlational versus causal nature of my findings. I have chosen to use the ELS:2002 dataset in order to evaluate the role of school composition in explaining educational patterns among Mexican origin youth in a nationally representative sample of students.

In the ELS:2002 dataset, Mexican origin status can only be identified through the Hispanic self-identification variable, because there is no question on the ELS:2002 regarding country of birth or parental country of birth. The results of my analysis may be biased if Mexican origin Latino/a youth that do not identify as Latino/a have more favorable outcomes than those who continue to identify as Latino/as of Mexican origin (see Duncan and Trejo 2007). For example, if Mexican origin Latino/as that do not identify as such attend schools that are less racially/ethnically or socioeconomically isolated than their peers who do identify as Mexican origin Latino/a, then the school compositional characteristics of Mexican origin youth will appear to be worse than they would be if Mexican origin status could be discerned for all students.

Similarly, my results are likely biased by the selective sample of Mexican origin 10th graders in the ELS:2002. A portion of Mexican origin youth drop out of school prior to 10th grade or are teenage labor migrants that never enroll in U.S. schools (Oropesa and Landale 2009). Mexican origin youth that stay enrolled in school through 10th grade may have more favorable schooling characteristics than those that drop out of school early. Additionally, these students may be more resilient to school compositional impacts on their educational outcomes than early dropouts or students that never enroll. My analysis may underestimate the impact of schooling contexts on Mexican origin outcomes if Mexican origin youth that are not observed—early dropouts and teenage migrants that never enroll in school—have greater susceptibility to school compositional impacts on their outcomes than those in the ELS:2002 sample. I argue, however, that the degree of bias presented by the omission of youth that drop out of school prior to 10th grade or who migrate to the U.S. and never enroll in U.S. schools is minimal.

Another limitation of this research is the use of quantitative methods to evaluate the relationship between school compositional characteristics and Mexican origin student outcomes. I have highlighted several mechanisms through which school composition could impact Mexican origin students, including institutional resources, peer influences and peer comparison processes, and parental influences. However, it is difficult to measure these mechanisms using quantitative data. Even in the case where the levels of these variables could be perfectly measured, the ways that these constructs play out within schools is not easily captured by quantitative data. For instance, it might be possible to measure the years of teacher experience reported by principals in the ELS:2002. However, it would not be possible to observe variation in teacher experience or how teacher experience is distributed across students within a school. This limitation applies to nearly any quantitative study that uses the longitudinal datasets provided by NCES.

Finally, the ELS:2002 is an observational dataset, which only makes it possible for me to draw conclusions about correlations or associations between school compositional variables and student outcomes, rather than causal relationships. Students in ELS:2002 are not randomly assigned to schools, and school composition is not randomly distributed across schools. In future work, I plan to utilize quasi-experimental methods, such as propensity score weighting or inverse probability of treatment weighting, to check the robustness of my results. However, even these methods assign weights to observations based on *observable* characteristics, and cannot completely eliminate the potential impact of *unobserved heterogeneity* on my results. In future work, it may be possible to evaluate the causal effects of school composition on Mexican origin student outcomes using smaller, non-nationally representative data from randomized housing experiments or charter school lotteries.

IV. FUTURE RESEARCH

My dissertation points to several potential directions for future research on the relationship between school composition and the educational outcomes of Mexican origin youth. In Chapter 2, I highlight the need for more research on school racial/ethnic and socioeconomic segregation patterns among Mexican origin youth as a subgroup of interest. While there is a burgeoning literature on the persistence of school racial/ethnic segregation and increasing school socioeconomic segregation among students (Fiel 2013; Logan et al. 2008; Logan, Stowell, and Oakley 2002; Orfield and Eaton 1996; Orfield et al. 2012; Owens et al. 2014; Reardon et al. 2012, 2006), few prior studies focus on school segregation patterns among Latino/a or Mexican origin youth.

Data limitations are the main reason for a lack of insight into Mexican origin school segregation patterns. The data collected by the National Center for Education Statistics (NCES), which is used in most analyses of school segregation patterns, does not include information about national origin within the Latino/a population nor parental nativity or birthplace. There are several ways to potentially circumvent these challenges. First, the School District Demographics System (SDDS) from NCES allows researchers to evaluate school district population composition by aggregating data from the American Community Survey (ACS) up to the school district level. In this way, it may be possible to characterize between-district school segregation patterns between Mexican origin youth and their peers. Given that between-district school racial/ethnic segregation makes up an increasing component of overall racial/ethnic segregation (Fiel 2013; Logan et al. 2008; Reardon et al. 2000), such an analysis could provide important insight into segregation patterns between Mexican origin youth and their peers across districts.

Second, it may be possible to combine longitudinal datasets from NCES in order to analyze time trends in the school compositional characteristics of Mexican origin Latino/a students. For example, combining data from the High School and Beyond Study of 1982 (HSB:82), the National Educational Longitudinal Study of 1988 (NELS:88), the Educational Longitudinal Study of 2002 (ELS:2002), and the recent High School Longitudinal Study of 2009 (HSLS:09) could provide insight into school compositional characteristics among cohorts of Mexican origin Latinos/as from the 1980s through the 2010s. Additionally, these datasets include a wide variety of background control variables, which would allow for a decomposition of time trends in Mexican origin Latino/a school compositional characteristics into changes in levels of household resources versus returns to household resources such as parental education.

This dissertation examines the relationship between school composition and Mexican origin schooling outcomes at one point in the life course—during high school. One goal of my future research is to place the relationship between school composition and Mexican origin educational outcomes in a broader life course perspective. How persistent are Mexican origin school compositional characteristics from kindergarten through college? Do Mexican origin youth have opportunities to escape racially/ethnically and socioeconomically isolated schooling environments during childhood, adolescence, or young adulthood? Do school compositional characteristics have a differential impact on Mexican origin youth at different points in the life course? These are all questions that I would like to address in future research.

Additionally, my prior research has focused on how immigrant destinations influence variation in educational outcomes among Mexican origin youth. I would like to combine this prior research with my current analysis in order to examine whether immigrant destinations moderate the impact of school composition on Mexican origin student outcomes. As Latino/a

families become more dispersed to newer immigrant gateways, those new gateways are themselves becoming more racially/ethnically segregated (Hall 2013; Lichter et al. 2010; Lichter and Johnson 2009). Attending a racially/ethnically isolated school in a new destination may be different than attending a racially/ethnically isolated school in an established gateway.

Finally, a qualitative or mixed methods approach could provide greater insight into the relationship between Mexican origin youth and schooling texts. Qualitative interviews with Mexican origin families across immigrant destinations could provide insight into how Mexican origin households approach decisions about and school choice within different contexts. Additionally, interviews with Mexican origin students in schools with varying school compositional characteristics could provide information about how Mexican origin youth experience different school environments. In other words, a qualitative or mixed methods methodological framework could provide greater insight into the mechanisms linking school compositional arrangements to Mexican origin student outcomes.

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APPENDIX A: MEASURES USED IN EXPLORATORY FACTOR ANALYSIS OF STUDENT ENGAGEMENT

Table A.1. Measures Used in Exploratory Factor Analysis of Student Engagement, ELS:2002

Variable Name	Variable Description	Answer Scale
BYS28	How much likes school	1-3 (Not at All to A Great Deal)
BYS27E	School is a place to meet friends	1-4 (Strongly Agree to Strongly Disagree)
BYS27C	Has nothing better to do than school	1-4 (Strongly Agree to Strongly Disagree)
BYS27A	Classes are interesting and challenging	1-4 (Strongly Agree to Strongly Disagree)
BYS54O	Importance of getting a good education	1-3 (Not Important to Very Important)
BYS37	Importance of grades to student	1-4 (Not Important to Very Important)
BYS24A	How many times late for school	1- Never, 2- 1 to 2 times, 3- 3 to 6 times, 4- 7 to 9 times, 5- 10 or more times
BYS24B	How many times cut/skip classes	1- Never, 2- 1 to 2 times, 3- 3 to 6 times, 4- 7 to 9 times, 5- 10 or more times
BYS24C	How many times absent from school	1- Never, 2- 1 to 2 times, 3- 3 to 6 times, 4- 7 to 9 times, 5- 10 or more times
BYS38A	How often goes to class without pencil/paper	1- Never, 2- Seldom, 3-Often,4-Usually
BYS38B	How often goes to class without book/s	1- Never, 2- Seldom, 3-Often,4-Usually
BYS38C	How often goes to class without homework	1- Never, 2- Seldom, 3-Often,4-Usually
BYHMWRK	BY hours per week spent on homework (in and out of school)	0-45 (Top coded at 46)
BYXTRACU	Number of school-sponsored activities participated in 01-02	0-8 (Top coded at 8)
BYTE04	Student usually works hard for good grades (English)	0- No, 1- Yes
BYTE13	How often student completes homework (English)	1-5 (Never to All of the Time)
BYTE14	How often student is absent (English)	1-5 (Never to All of the Time)
BYTE15	How often student is tardy (English)	1-5 (Never to All of the Time)
BYTE16	How often student is attentive in class (English)	1-5 (Never to All of the Time)
BYTE17	How often student is disruptive in class (English)	1-5 (Never to All of the Time)
BYTE12	Student has fallen behind in school work (English)	0- No, 1- Yes
BYTM04	Student usually works hard for good grades (math)	0- No, 1- Yes
BYTM13	How often student completes homework (math)	1-5 (Never to All of the Time)
BYTM14	How often student is absent (math)	1-5 (Never to All of the Time)
BYTM15	How often student is tardy (math)	1-5 (Never to All of the Time)
BYTM16	How often student is attentive in class (math)	1-5 (Never to All of the Time)
BYTM17	How often student is disruptive in class (math)	1-5 (Never to All of the Time)
BYTM12	Student has fallen behind in school work (math)	0- No, 1- Yes