

School Composition and Educational Expectations:
Are Children of Immigrants Affected Differently?

Ryan Wells*

The University of Iowa

*Presented at the Association for the Study of Higher Education Annual Conference
Louisville, KY
November 9, 2007*

*Contact Information:
N498 Lindquist Center
University of Iowa
Iowa City, IA 52242
ryan-wells@uiowa.edu

School Composition and Educational Expectations: Are Children of Immigrants Affected Differently?

Abstract

As immigration grows in the U.S., educators and policymakers must understand how the educational processes for children of immigrants differ from non-immigrants. Since expectations for higher education are a necessary, though insufficient, step toward college attendance and degree attainment, and since students have their attitudes influenced by the schools they attend, I examine high school composition for its effects on expectations. Specifically, I examine the effect that the proportion of children of immigrants in a school has on all students' expectations, and also examine the differential effects of school composition on the expectations of children of immigrants compared to non-immigrants. Results show a somewhat positive effect of immigrant composition on expectations, and clearly show that children of immigrants are affected differently by school composition than are non-immigrants in ways that contradict commonly accepted theoretical views.

School Composition and Educational Expectations: Are Children of Immigrants Affected Differently?¹

Introduction

In a 2006 address to the Association for the Study of Higher Education (ASHE), global immigration expert Marcelo Suárez-Orozco stated: “In the United States, immigration is both history and destiny” (Suárez-Orozco, 2006). With immigration as an integral part of the fabric of American society, the success of immigrants and their children is vital to the country, and to these individuals’ well-being. In today’s society this success is one that often depends on the completion of higher education, and increasingly on the completion of advanced higher education degrees. However, many children of immigrants are not enrolled in high schools that sufficiently meet their needs (Ruiz-de-Velasco & Fix, 2000), and subsequently many are not making a successful transition to, and/or completion of, higher education (Erisman & Looney, 2007).² Students’ expectations for higher education while in high school are important since without initially high expectations, the path toward a college degree is nearly impossible. In response to the challenge of preparing students for higher education in a society with an increasing and increasingly diverse population of children of immigrants, this study examines the effects of high school composition on educational expectations.

The proportion of children of immigrants is increasing in the U.S. (Morse, 2002; Portes & Rumbaut, 2006), and immigrant populations are extending to parts of the country that have not

¹ This research was supported by funds from the AIR-NCES-NSF grant program, *Preparation for Postsecondary Education: A Shared Responsibility*. The author would like to thank David Bills, Mary Noonan, Ernest Pascarella, Mike Paulsen, and Paul Umbach for helpful comments on previous versions of this paper.

² I use the terms “children of immigrants” and “immigrant students” interchangeably to refer to both first- and second-generation immigrant students.

traditionally seen large numbers of immigrants (U.S. Census Bureau, 2005). Therefore, this study examines the effect that a school's population of children of immigrants has on all students' educational expectations. This is a valuable extension of past studies which examined racial and socioeconomic composition, but which neglected the influence that the collective immigrant composition may have.

Past research has largely shown that children of immigrants have expectations that are higher than those of their non-immigrant peers (Goyette & Xie, 1999; Hao & Bronstead-Bruns, 1998; Kao & Tienda, 1995; Marjoribanks, 2002; Portes & Rumbaut, 2001; Rumbaut & Portes, 2001; St. Hilaire, 2002). Since a major portion of students' socialization experiences in the U.S. take place in the schools they attend, this study also examines the ways in which school composition (based on race/ethnicity, SES, and ability) may affect the expectations of children of immigrants differently than non-immigrants. In other words, this study examines the compositional effects of children of immigrants on all students' expectations, and also examines the effects of school composition by race, SES, and ability on the expectations of children of immigrants specifically.

This study, therefore, is based on two overarching research questions:

- How do the immigrant compositions of U.S. secondary schools affect the educational expectations of all students?
- How do the compositions of U.S. secondary schools affect the expectations of children of immigrants for higher education differently than non-immigrant students?

Theoretical Framework and Prior Research

Individual educational expectations and children of immigrants

Student educational expectations are good predictors of eventual educational attainment, which in turn is a predictor of occupational and overall status attainment (Sewell, Haller, & Ohlendorf, 1970; Sewell, Haller, & Portes, 1969; Spenner & Featherman, 1978). Higher education research has recognized student aspirations and/or expectations as a vital first step in the college choice process. A “predisposition” to higher education (Hossler, Braxton, & Coopersmith, 1989; Hossler & Gallagher, 1987), necessarily including high expectations, has been modeled as the first component of a successful navigation of college requirements, applications, financial aid, enrollment, attendance, persistence, and eventual degree attainment. The “path to college” (Cabrera & La Nasa, 2001), or “pipeline to higher education” (Horn & Carroll, 1997), recognizes the expectation of college as a critical initial part of the choice process.

Although there are many individual benefits to higher education, for students on the margins of college entry the decision can be perplexing. Researchers have examined the ways that the college choice process differs for low-socioeconomic status students as well as racial/ethnic minority students (Paulsen & St. John, 2002; Perna & Titus, 2005; St. John, Paulsen, & Carter, 2005). One may assume that immigration status, as another way that our society confers privilege (or conversely, disadvantage), may be an additional factor by which these vital processes differ.

Unique barriers faced by immigrant students include varied educational backgrounds, the age of entry into school, cultural conflicts, differing amounts of parental involvement, the possible need to work to support the family, mobility issues especially for migrant working

families, and/or the psychological adjustment to a new culture and a new school (Gonzalez, 2005). Immigrant families may also face barriers based on socioeconomic status, legal status, or reception by the native population (Lopez & Stanton-Salazar, 2001), which is related to the “mode of incorporation” (Portes & Rumbaut, 2006) or the “ethos of reception” (Suárez-Orozco & Suárez-Orozco, 2001). Additional barriers for children of immigrants may include a lack of understanding of the U.S. higher education system and the transition to it, low English-proficiency, and racism (Behnke, Piercy, & Diversi, 2004). This study of expectations for children of immigrants seeks to more fully understand the college choice process of this important group of potential higher education students given these challenges.

Theoretical views suggest mechanisms by which children of immigrants may be affected differently in their expectations formation processes than non-immigrants. Assimilation theory posits that as immigrant students are socialized by the majority student group, over time, due largely to in-school contact, their expectations tend to align more closely with that of the dominant group. Recent modifications of assimilation theory propose that immigrant students may assimilate to particular segments of American-born youth depending on characteristics of the student, the native-born group, and the environment (Portes & Rumbaut, 2006; Portes & Zhou, 1993; Rumbaut & Portes, 2001). “Segmented assimilation,” therefore, implies that children of immigrants may develop expectations differently based on the peers they interact with in school – i.e., the school composition.

Several theories propose that the children of immigrants will have higher initial educational expectations than their native-born counterparts. Some scholars claim that immigrant students may have higher expectations due to a positive self-selection effect (i.e., not everyone desires to come to the United States, and among those that do, not all have the means) (Portes &

Rumbaut, 2006). Kao & Tienda (1995) based their study of immigrant students' expectations on the concept of "immigrant optimism." Essentially, children of immigrants are significantly influenced by the optimism of parents who likely came to the United States in search of a better life and the elusive "American Dream" and therefore also have higher average expectations. Studies which have examined the educational expectations of immigrants specifically have generally supported these theories and have found that children of immigrants have high expectations for higher education, most often higher than non-immigrants

Studies of school effects on immigrants' expectations specifically are rare and lack the methodological rigor to draw clear conclusions. Those that do exist most often do not contain a non-immigrant cohort for comparison purposes. Nevertheless, since school effects have been shown to differ for students based on socioeconomic status, race/ethnicity, and/or gender (Carter, Fernández, & Locks, 2006; Hamrick & Stage, 1998; Meyer, 1970; Michael, 1961; Spady, 1976), since theoretical considerations point to likely differentiation in expectation formation for children of immigrants, and since immigrants of any race/ethnicity face barriers that non-immigrants do not, one may assume that school effects on expectations also differ based on immigrant status.

School compositional effects on expectations

Past literature concerning the ways in which school composition affect the expectations of students has primarily focused on the aggregate contextual characteristics of schools. The two most common theories of school characteristics affecting expectations concern normative and comparative effects. A normative view posits that "positive" characteristics of the school (such as high aggregate SES) affect the expectations of students positively due primarily to a

socialization effect: since high-SES students generally have higher expectations, this expectation or feeling of entitlement may become the normative view for all students. Most empirical results support the positive association that a normative theory proposes between school-SES and expectations (Campbell & Alexander, 1965; Frost, 2007; Khattab, 2005; Meyer, 1970; Shavit & Williams, 1985).

In contrast to the normative view, a comparative view posits that schools with “positive” characteristics (such as high aggregate ability) may produce a competitive environment which leads to lower expectations for the average student. This is known as the “frog pond” effect (Davis, 1966): it is better to be a big frog in a small pond than it is to be a small frog in a big pond. Studies of this “frog pond” effect generally support the comparative theory of school effects and have found a negative association between aggregate ability of the school and individual expectations (Alwin & Otto, 1977; Khattab, 2005; Marsh, 1991; Meyer, 1970; Shavit & Williams, 1985).³ For both of these effects, however, there have been researchers that, although they found statistically significant school effects, claimed that school effects in general were trivial or inconsequential (Alexander & Eckland, 1975; Alwin & Otto, 1977; Hauser, Sewell, & Alwin, 1976; Sewell & Armer, 1966).

Studying school composition effects includes the racial/ethnic makeup of schools. Several theories lead to the conclusion that a school’s racial/ethnic minority composition is positively associated with educational expectations. One theory assumes that resources, social networks, information, and opportunities are disproportionately in the realm of white, middle and upper class America and that isolation or segregation from these groups may result in barriers to success. Though clearly a disadvantage overall, this situation may paradoxically increase

³ One recent study in Texas found a positive association between expectations and the percentage of students meeting state testing standards (Frost, 2007).

educational expectations. Isolation may lead to an overestimation of one's status potential, due to a lack of one or more of the items above (Hoelter, 1982; Wilson, 1987). Related to that, segregated groups may not have to compete with the majority group and therefore have a higher self image and higher related aspirations (Shavit & Williams, 1985; Yogev & Ilan, 1987).

High-minority schools are often schools with higher poverty rates and fewer resources. In different contexts such as these, students may experience "different rationality" that causes different types of aspirations (Little, 1978). Under such circumstances, relative deprivation theory (Runciman, 1966) implies that those who have less than they deserve in relation to what they observe for others (such as middle-upper class white students in better funded schools) may raise their expectations as an attempt to get their fair share of resources and rewards. Another theory posits that since Black and Latino students, on average, have more positive attitudes about schooling and higher expectations, their higher proportions in a school would simply improve the normative climate of expectations for all students.

Goldsmith (2004) combines several theoretical positions to propose that schools with greater proportions of Black and Latino students will improve students' beliefs about school because: "1) they facilitate comparisons with low-achieving students; 2) they concentrate students with optimistic and pro-school attitudes, improving the climate; 3) they isolate students from information about what is required for academic and occupational success; and 4) they have many students who lack skills in using school feedback to establish realistic expectations" (p. 127). In general, many empirical findings support these theoretical positions (Frost, 2007; Goldsmith, 2004; Shavit & Williams, 1985; St. John, 1975; Yogev & Ilan, 1987).

Goldsmith's four theoretical points apply equally well to immigrants and their expectations, regardless of their race/ethnicity. Therefore, the expectation-formation processes

within schools may also be examined by considering the percentage of a student body consisting of children of immigrants rather than solely the racial/ethnic composition. Inclusion of this variable is useful because, theoretically, “if immigrants dominate the student body, then the culture of the school may still be tilted toward the nations of origin” (Crosnoe & Lopez-Gonzalez, 2005, p. 6). If this is the case, assimilation may occur differently since the connection to the immigrant community may be stronger than the connection to the non-immigrant community. Based on this extension of theoretical views based on race and ethnicity, I examine the effects of the immigrant composition of schools on educational expectations.

The immigrant composition of schools has been studied much less than racial/ethnic composition. Immigrant composition negatively impacted rates of course failure for immigrant students (i.e., it was a positive effect for the student) (Crosnoe & Lopez-Gonzalez, 2005) and was positively related to 5th grade test scores in New York City (Schwartz & Gershberg, 2000). Although the immigrant composition of schools has been found to be a significant factor in past research, it has not been studied as a determinant of educational expectations.

The theories and past literature reviewed above lead to the following hypotheses:

1. Students in schools with higher percentages of immigrant students have higher expectations (based on a normative theory of expectations).
2. For children of immigrants...
 - a. A school’s aggregate SES and aggregate ability are more weakly associated with educational expectations for children of immigrants compared to non-immigrants (based on resilient “immigrant optimism” such that high expectations are not as likely to be lowered in low-SES or high-ability schools)

- b. The proportion of a school's population that is racial/ethnic minority or that is children of immigrants is more strongly associated with educational expectations for children of immigrants compared to non-immigrants (based on a normative theory of expectations and segmented assimilation theory).

Methodology

Data and variables

To examine school compositional effects on educational expectations, I utilized data from the Educational Longitudinal Study (ELS:2002/2004). I created a binary dependent variable from the ELS data indicating whether or not a 12th grade student expected to complete graduate or professional education. This defines a positive expectation as a response of “obtain a Master’s degree or equivalent,” or “obtain a Ph.D., M.D., or other advanced degree” in response to the survey question “As things stand now, how far is school do you think you will get?” Although expectations of a 4-year college degree, or less, are more common and are certainly worthy of attention, the attainment of a graduate or professional degree is increasingly the gateway to jobs in a post-industrial society (Bell, 1973). Combined with high credential inflation (Bills, 2004) and increased higher education enrollments, this means that the attainment of a graduate or professional degree is, in many ways, becoming the degree of distinction for higher-status jobs. A graduate degree, and therefore the expectation of that degree as a first step, is becoming increasingly important for status attainment and social mobility.

I included control variables at the student level based on theory and past research. These included race/ethnicity, gender, socioeconomic status, parental aspirations, parental involvement, family composition, peers’ plans, and student academic achievement. At the level of the school, I

included variables for aggregate student ability, aggregate socioeconomic status, racial composition (indicated by the proportion of Asian, Latino, and Black students in the school), and the proportion of the student body that was children of immigrants. For control variables at the school level I included Catholic and private school indicators (compared to public schools). I included urbanicity and region of the country as school-level control variables since immigrants often move to urban areas (Waldinger, 2001) in specific regions of the country (Portes & Rumbaut, 2006) and these factors may confound other results. Complete descriptive data and descriptions of the way in which each variable is operationalized are in Table A of the appendix.

Cases with complete data for the variables of interest were retained, which resulted in a sample of 10,851 students, including 1984 children of immigrants, at 747 schools. The most troublesome of the missing data was that 14.9% of the original cases were missing data concerning either the students' or the parents' birthplaces, such that their immigrant status could not be determined. I decided that imputation of immigrant status based on race, ethnicity, or other variables could be more misleading than dropping these cases altogether. However, this means that I am not completely certain if I am over- or under-representing children of immigrants in the study. However, in the final sample, children of immigrants are 18.3% of the total, which aligns very closely with other studies stating the ratio as nearly 1 out of 5 (Jensen, 2001; Morse, 2002). Therefore, my sample is likely to represent children of immigrants versus non-immigrants fairly well despite the missing data.

I also determined the extent to which certain characteristics that did not have missing data were represented in the missing data that were dropped. Using t-tests to compare cases in my final sample to cases in the original sample, the data for this study over-represented females, whites, high-SES students, and high-achieving students. It under-represented Asians, Latinos,

Blacks, low-SES students, and low-achieving students. For the children of immigrants specifically, the final sample under-represented Latinos, high-SES students, and high-achieving students, while it accurately represented the proportion of Asians, Blacks, and males/females. In addition, twelfth-grade expectation data may be higher, on average, than earlier grades due to the removal of students from the dataset who dropped out before high school graduation, and who likely had low expectations in 10th grade. This censoring bias is especially problematic for Blacks and Latinos because of the relatively higher dropout rates among these groups. This study only includes students who were in school in the spring term of their 12th grade year, and so results are only generalizable to that population. All of this information must be kept in mind when interpreting results.

Statistical Methods

The purpose of this study was to analyze school characteristics for their effects on students' educational expectations. Since the dependent variable (expectations) was at the student level, and the independent variables of interest (school composition) were at the school level, I employed hierarchical linear modeling (HLM). Because students clustered within schools are not statistically independent observations, regular regression techniques may underestimate the standard errors, which would lead to incorrect interpretations of statistical and substantive significance of the predictor variables (Ethington, 1997; Luke, 2004; Raudenbush & Bryk, 2002; Snijders & Bosker, 1999).

Multi-level regression models can utilize interaction variables much the same as non-multi-level regression. By interacting level-2 and level-1 variables I can examine how expectations differ between sub-populations based on various school factors. Therefore,

regression models with interaction variables indicate how children of immigrants were impacted differently by school composition factors than non-immigrants.⁴

For this study, I used advice given in the most recent literature which suggests that when the primary concern is the effect of level-2 predictors while controlling for level-one variables grand-mean centering of level-1 variables is appropriate, and when differential effects or cross-level interactions are the focus then group-mean centering is appropriate (Enders & Tofighi, in press; Porter, 2005; Raudenbush & Bryk, 2002). Therefore, all variables are grand-mean centered for this study, with the one exception that in models using cross-level interactions to determine the differential effects of school composition by immigrant status, the immigrant dummy variable is group-mean centered. In addition, robust standard errors were used, and population-average models are reported, as suggested in the literature (Raudenbush, Bryk, Cheong, Congdon, & du Toit, 2004).

The first step for multi-level models was to examine the amount of variability in students' educational expectations which existed between schools, rather than within schools. The greater the variance between schools, the more impactful the school-level results will be on expectations. Using an interclass correlation coefficient (ICC) I examined this variance. In order to calculate the ICC, an unconditional or null model was run with predictors at neither level 1 nor

⁴ The cross-level interaction approach was chosen instead of a variable-slope model which is also possible using HLM. Although variable slope models allow one to see how the slope for the immigrant status variable would change for each school, that technique can only be used for schools that have variation in the immigrant variable – i.e., the school must have both immigrant and non-immigrant students in the sample. This approach would exclude 164 schools and 2053 students from my sample. Therefore, I chose to use cross-level interactions without allowing the slopes to vary, similar to other recent research (Frost, 2007). This gives a more general trend concerning the ways in which immigrants may be affected by school composition differently than non-immigrants.

level 2 ($\beta_{0j} = \gamma_{00} + u_{0j}$). The ICC was 0.07 ($.26/ (.26 + 3.29) = .07$), implying that roughly 7% of the variance in students' graduate school expectations is explained at the school-level.⁵

The calculated ICC value above is somewhat low, meaning that schools only explain a small proportion of the variance in students' educational expectations. However, three things make continued multi-level analysis worthwhile. First, additional variance may be created at the school level as variables are introduced into the models (Roberts, 2007). Second, even a small portion of the variance in expectations explained by school effects is worth exploring since these are the parts of the expectation-formation process that educational researchers and policymakers can hope to impact in the near-term, as opposed to family or demographic characteristics. Third, the formula to calculate the ICC for logistic regression is an approximation of the original ICC formula for continuous outcomes. It is difficult to know how accurate this number might be because logistic models such as mine have heteroscedastic level-1 variance (Raudenbush & Bryk, 2002, p. 298).

One other way to get an impression of the amount of variance that exists between schools is to create a "95% prediction interval" as suggested by Raudenbush & Bryk (2002, p. 297). In my case this was created using the following process. I first created a 95% interval of log-odds from the null model using the expectation of a graduate as the dependent variable: $-0.57 \pm 1.96 * \sqrt{0.26} = (-1.57, 0.43)$. When this was converted into probabilities rather than log-odds, the interval was (0.17, 0.39).⁶ In other words, it appears that within the 95% range, there were some schools where only 17% of the students, on average, expected to attain a graduate/professional

⁵ Although the ICC was originally created to examine continuous dependent variables, a formula to calculate an estimated ICC for logistic models has also been developed: $\tau^2/(\tau^2 + \pi^2/3)$ (Snijders & Bosker, 1999, p. 224).

⁶ The log-odds were converted into probabilities using: $1/(1+\exp(-x))$ (Raudenbush & Bryk, 2002, p. 298).

degree, and other schools where 39% of the students expected to attain that level. In general, these analyses indicated that there was sufficient variance between schools in the average level of expectations that students had for higher education. Multiple levels appeared to be both appropriate and worthwhile and I proceeded with multi-level analyses using HLM.

When collinearity diagnostics were run for all variables, the level-2 variables for percentage Latino and percentage immigrant had VIF values of 3.194 and 3.288 respectively.⁷ These values are above Allison's (1999) cautionary point of 2.5. Others are less conservative than Allison in their estimations of troublesome tolerance levels, however. Fox (1991) suggests that a VIF of 4 or greater indicates collinearity, while Myers (1990) and Stevens (2002) consider VIFs of 10 to be problematic. Since there is no clear cutoff point for VIF levels and collinearity, I chose to run multiple regression models to give as complete of a picture as possible. Since the variables for percent Latino and percent immigrant were both in the questionable VIF range, and since no research has considered both of these variables in this exact way, I chose to present three different versions of the results for each regression model. I report findings for each model with percent-race variables in the model but without the percent-immigrant variables, then I present a model without percent-race variables but including the percent-immigrant variables, and then I present a complete model with both racial and immigrant composition variables simultaneously. Though this complicates the presentation and interpretation of results, it should give the most complete picture for racial/ethnic and immigration composition variables.

In the first model using variables at both the individual and school levels I included only the level-2 variables of interest for school composition. These models showed the effects of

⁷ Collinearity diagnostics (the tolerance level and/or VIF) are technically for OLS regression and not for logistic regression; there is no exact equivalent, similar to the fact that there is no equivalent R², in logistic regression. Though imperfect, this should at least give an estimate of collinearity problems for the logistic model.

school composition without controlling for other school factors. In the next set of models I included all variables at both level-1 and level-2. This allowed one to see the effects of the variables of interest while controlling for other salient school-level (and individual-level) factors. The final set of models included all level-1 and level-2 variables, and also included interaction variables for immigrant status. I interacted the immigrant dummy variable with each of the school-composition variables of interest. This showed how school composition factors affect expectations for children of immigrants more or less than they affect non-immigrants' expectations. In all tables I report changes in overall predicted probabilities for expectations, based on a one-unit change in any given independent variable, represented with delta-p values. I used calculations for the delta-p statistic as specified by Cabrera (1994, pp. 245-246).

Results

Results concerning expectations for a graduate or professional degree (compared to expecting less than a graduate degree) are presented in Tables 1 & 2.⁸ Table 1 shows how student-level factors were associated with expectations for a graduate/professional degree without taking school-level factors into account. As expected, immigrant status is significantly positive. The child of an immigrant is, on average, about 8% more likely to expect a graduate degree than a non-immigrant. Other factors at the individual level also matched past literature. Positive effects were observed for females, racial minorities, students with high parental and peer expectations, and students with high SES and ability.

<insert Table 1 here>

⁸ More complete tables of log-odds values, with all variables, are available upon request.

When school level factors were added (Table 2) Asian and Latino students no longer had higher expectation than Whites, but all other effects stayed relatively stable. For example, children of immigrants still had higher average expectations for graduate and professional degrees than did non-immigrant students. The significance and direction of the level-1 variables remained consistent in all models for the study, though they are not shown in subsequent tables.

Model 1 in Table 2 shows the effects of the compositional variables of interest without other level-2 control variables. This model supported the common finding that school-SES was positively related to a student's expectations, and that school-ability was negatively related (a.k.a., the "frog pond" effect). These results support the comparative and normative theories of expectations for all students. This model also showed marginally positive effects of the proportion of Blacks in a school.

<insert Table 2 here>

Models 2-4 in Table 2 also tested the effects of school-level variables on individual expectations (without interactions) but included all school-level control variables as well. When included, urban schools (compared to non-urban schools) were consistently associated with higher expectations, and schools in the South (compared to the Midwest) were strongly associated with higher expectations for graduate or professional degrees. The coefficients for school composition variables changed slightly in the presence of these controls. A school's aggregate SES was only marginally statistically significant, and the effect of a school's aggregate ability was lessened, but was still statistically significant. Racial/ethnic composition effects disappeared with the exception of the proportion of the school that was Asian, which has a slight positive association. The immigrant composition variable was also marginally positively significant. However, when included in the same model (model 4, Table 2), the immigrant

composition and Asian composition variables dampened each other's associations, perhaps implying that these represent similar underlying effects since Asians are a significant portion of the immigrant population.

Models 5-7 in Table 2 tested my hypothesis concerning the differential impact of school composition on children of immigrants by including a series of cross-level interaction variables. When interaction variables were included, the level-2 main effects all remained very similar to the effects described for models 2-4. The first notable conditional effect is that a school's SES consistently affected children of immigrants negatively relative to the effect for non-immigrants. Since the "main" effect for aggregate SES was not statistically significantly different from zero, this means that a school's SES did not have an effect on non-immigrants' expectations, but that for children of immigrants it had relatively negative effect.⁹

A school's aggregate ability also had a statistically significant conditional effect for immigrant students. Since the "main" effect of school-level ability is negative, the positive conditional effect implies that the "frog pond" effect, which was true for non-immigrants, may not be true for children of immigrants. In other words, high-ability schools were not associated with lower expectations for children of immigrants to the extent that they were for non-immigrants (and conversely, low-ability schools were not associated with higher expectations to the same extent). In models 5-7 no conditional effects were found for variables concerning race/ethnicity or immigrant composition. The exception was a marginally positive conditional effect for children of immigrants, compared to non-immigrants, associated with the percentage of the school population that was Black.

⁹ The "main" effects of school composition variables are actually the effect for nonimmigrants rather than true overall main effects, due to the inclusion of the interaction of these variables with the immigrant dummy variable (see Jaccard, 2001).

To emphasize the conditional effects, and therefore the differences between children of immigrants and nonimmigrants, I present Figures 1 & 2 representing the predicted probabilities for immigrants versus non-immigrants of expecting to complete a graduate or professional degree, by school-SES and school-ability – the two factors that had consistent conditional effects.¹⁰ It is important to note that the estimated probabilities in these figures are hypothetical estimations. I set all variables other than those of interest to their means (which are zero, since variables are mean-centered) whereas in “real life” these values’ would be correlated with the manipulated variables of interest. These simulations nonetheless show clearly that although non-immigrants followed the commonly accepted comparative and normative school-effect associations for SES and ability, children of immigrants did not.

<insert Figures 1 & 2 here>

In the models in Table 2, there was a general, though slight, decrease in value of tau (the between-school variance) compared to the null model ($\tau=0.26$) and compared to the model with only level-1 variables ($\tau=.06$) (complete tables are available upon request). This lends mild support to the underlying assumption that level-2 variables helped to explain additional between-school variance. Models 5-7, which included conditional effects, did not decrease the value of tau, which means that they did not necessarily explain more of the variance than models without interactions. However, since the positive and negative conditional effects nearly canceled each other out, one may not expect the explained variance to increase. Nonetheless, these significant conditional effects are theoretically important in showing how the expectation process differs between sub-groups. In addition, the fact that these models explained nearly 90% of the between-

¹⁰ Probabilities were calculated from the logit coefficients in Model 9 of Table 2 (with all other values held at their means) using the following formula: $\Pr(y=1|x) = \exp(x\beta)/(1+\exp(x\beta))$.

school variance means that these are well-specified, and that the variables included are some of the most salient school-level factors affecting students' expectations.¹¹

Discussion and Implications

Many of my results confirm prior research. Children of immigrants, on average, have higher expectations than non-immigrants, as do females, Black students, students with high parental expectations, students with peers that plan to go to college, high SES students, and high achieving students. At the school level, schools in the South and urban schools are associated with higher expectations. The classic "frog pond" theory is supported since there is a negative association between a school's aggregate ability and an individual's expectations overall. Schools with higher proportions of Asians have marginally significantly positive effects on expectations as well.

The first hypothesis for this study - that students in schools with higher percentages of immigrants will have higher expectations - is somewhat supported. In models that only contained variables about the immigrant composition of a school (without race/ethnicity) this hypothesis was supported, especially for nonimmigrants which is what is represented as "main effect" in model 6. In models which included race/ethnicity, it was not significant. This may be due to the confounding effect of Asian immigrants, since those variables appear to diminish each other's positive effects to some degree when considered simultaneously.

¹¹ Based on past literature, I thought that there may be curvilinear effects of school composition on expectations. In other words, there may not be a constant effect of composition on expectations across the entire range of school compositions. I tested squared terms of all school composition variables for both dependent variables, and found no main effects that were significant at .05. Although it is still possible that there are curvilinear effects (other than squared terms), this was not tested and is beyond the scope of my current study.

The second hypothesis for this study - that children of immigrants are differentially impacted by school composition compared to non-immigrants - has not been previously studied. In support of hypothesis 2a, the graduate school expectations of children of immigrants tend to be less positively affected by a school's socioeconomic composition than are non-immigrant students. In fact, immigrant status may actually be associated with lower expectations in higher-SES schools, all else being equal. This could represent a sort of socioeconomic frog pond phenomenon, and deserves further examination theoretically and empirically. Conversely, children of immigrants may have relatively higher expectations than non-immigrants when in lower-SES schools. This could be a result of immigrant optimism regardless of the socioeconomic environment, which non-immigrants may not have to the same extent.

Also in support of hypothesis 2a, immigrant students have a positive conditional effect based on a school's aggregate ability in models 5-7. The overall effect for aggregate ability is significantly negative, meaning that children of immigrants do not appear to have their expectations lowered to the same degree as non-immigrants when in a higher-ability environment. In other words, they have relatively higher expectations in that more competitive environment. Again, children of immigrants appear to be differentially impacted by school composition.

More formally, this analysis, emphasized by Figures 1 and 2, demonstrates that comparative and normative theories of school effects are not wholly accurate for children of immigrants, at least not to the same degree as they are for non-immigrants. As with many broad theories, these commonly accepted relationships do not hold for particular sub-populations of students, and not incidentally, students from a marginalized group. The comparative and normative theories of school effects needs to be reexamined based on various subpopulations,

and specifically for their effects on children of immigrants. One possible explanation could parallel that which has been put forward for racial/ethnic minority groups which states that each group (in this case, children of immigrants) may serve as a frame of reference for expectation-formation to a greater extent than the larger school and/or community populations (Centra, 1980). This should be tested in further research concerning compositional effects and immigrant students.

The conditional effects of school racial composition and immigrant composition on expectations are nonexistent for the most part, with the exception of a marginally positive effect based on the proportion of Black students in the school. This result contradicts hypothesis 2b. However, this one marginally significant finding may provide some small level of support for segmented assimilation theory since although the percentage of Black students has no effect for students overall, children of immigrants may have a connection to the higher expectations of Black students in a school population in a way that non-immigrant students do not. Whether such a compositional racial effect is really supported, and whether or not this is really evidence of segmented assimilation, will require further research with that specific focus.

These results have implications and applications for a variety of audiences. Policymakers at all levels will be able to use these results to modify policies based on how school composition affects college expectations, and how they affect children of immigrants differently. For example, pre-college programs (such as the national GEAR UP program and many types of university bridging programs) could target the types of schools that are associated with low-expectations, and could tailor these programs to work with children of immigrants specifically in schools with traits that are shown to differentially impact these students. Administrators,

teachers, and citizens at large can better understand and respond more effectively to the needs of a growing immigrant student population.

The most strongly significant conditional effects – that children of immigrants are differentially negatively impacted by higher socioeconomic schools, and differentially positively impacted by higher ability schools - may mean that special college counseling could be targeted at children of immigrants. Although these school characteristics are inversely related, schools that are disproportionately high-SES and low-ability may be especially detrimental to expectations for children of immigrants.

Essentially these conditional effects show that children of immigrants' expectations are less volatile in response to the school composition than are non-immigrants. This is positive in the sense that immigrant students' higher average expectations are less affected by the school. However, since children of immigrants still enroll in college in lower-than-expected proportions, one can not assume that this “positive” effect on expectations will be sufficient for actual social mobility. In fact, the gap between expectations and matriculation in higher education - the “misaligned ambitions” (Schneider & Stevenson, 1999) if you will - and what affects this gap for children of immigrants compared to non-immigrants, is an important area worthy of extended study.

Similarly, although this school-level association with expectations is interesting and important, school-level SES and ability still have a generally positive association with achievement (e.g., Portes & Hao, 2004), which means that the *mismatch* between relatively higher expectations and relatively lower achievement/attainment for children of immigrants should be studied further, especially as it related to school composition. At a minimum, one can

state that children of immigrants appear to have their educational expectations affected by socioeconomic and ability composition differently than non-immigrants.

For practice more broadly then, programs such as those discussed above, which have high expectations as an explicit goal, may need to reconsider what is really needed for various types of students. Although high expectations are a necessary first step on the path to college and eventual status mobility, children of immigrants that already have high expectations on average, and who do not have those expectations affected in the same way that non-immigrant students do, may be better served by programs that focus on how to *realize* these expectations, rather than raise them. Programs aimed at children of immigrants may be better served by activities that provide concrete, practical information concerning college admissions, financial aid, and other factors affecting enrollment than by focusing on the formation of high expectations.

In general, this study shows that homogenous approaches to students' educational expectations may be misguided whether they are in theory, research, policy, or practice. This is a reminder to researchers and practitioners alike that subgroups of students, in this case the children of immigrants, may not be affected by schools in similar ways. This study, therefore, emphasizes the "critical quantitative" dimension by using sociological processes "to demonstrate that for particular population groups, some widely accepted models and assumptions are inaccurate" (Stage, 2007, p. 10). It should also serve as a reminder that even the distinction "children of immigrants" (which includes both first- and second-generation immigrants) is too broad. Further research should examine subgroups by immigrant generation, country of origin, English language ability, and many other potentially salient factors.

This study has extended past literature in five innovative ways by its: 1) examination of the effects of school composition on expectations in new ways, 2) examination of the children of

immigrants specifically, who have often been overlooked, 3) use of newer data than that used in past research on this subject, 4) use of greater methodological rigor than that used in much of the past research, and 5) advancement of sociological theory by addressing how school characteristics and immigrant status interact to differentially affect expectations. Therefore, this study is a critical first step on the path toward understanding the educational processes of an important and growing group of students, and also toward eventual higher educational attainment and social mobility for children of immigrants.

Table 1. Student-Level Logistic Regression for Expecting a Graduate/Professional Degree (Delta-p statistics reported)

	Individual factors
Immigrant	0.08***
Female	0.14***
Asian	0.08*
Latino	0.07**
Black	0.21***
Parental Expectations	0.23***
Parental Involvement	0.02
Peers' plans	0.16***
Single parent household	0.01
SES (std)	0.07***
Test Score (std)	0.15***

Note: ***p<.001; **p<.01; *p<.05; †p<.10

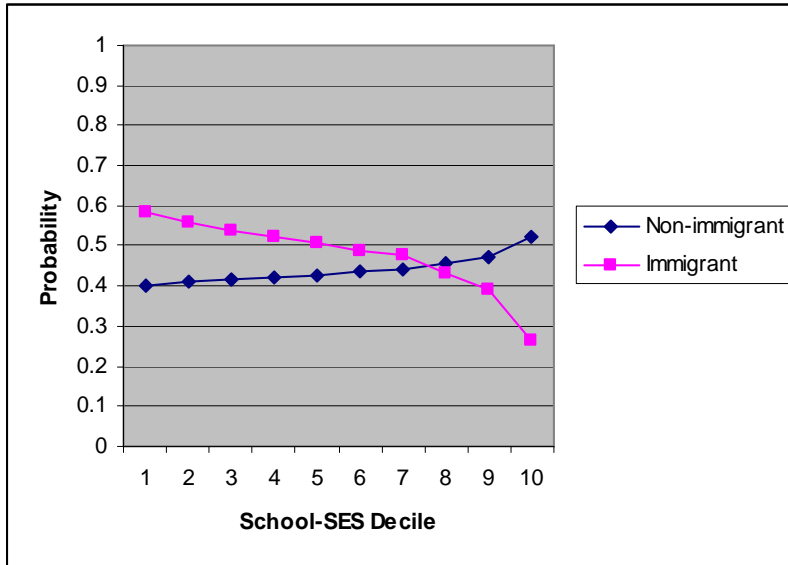
Complete details (including raw logit coefficients and standard errors) are available upon request.

Table 2. Logistic Regression for Expecting to Complete a Graduate or Professional Degree (Delta-p statistics reported)

	School comp. only (1)	All school level (race) (2)	All school- level (immig.) (3)	All school- level (4)	Plus cond. effects (race) (5)	Plus cond. effects (immig.) (6)	Plus cond. effects (7)
LEVEL 1 (N=10, 851)							
Immigrant	0.07*	0.07**	0.06*	0.07*	0.06*	0.05 ⁺	0.06*
LEVEL 2 (N=747)							
Agg. SES (std)	0.05***	0.03 ⁺	0.03 ⁺	0.03 ⁺	0.03 ⁺	0.03	0.03
Agg. Ability (std)	-0.04**	-0.04*	-0.04*	-0.04*	-0.04*	-0.04*	-0.04*
Asian Comp.	0.21	0.27*	--	0.26 ⁺	0.33**	--	0.24 ⁺
Black Comp.	0.10 ⁺	0.01	--	0.01	0.01	--	0.00
Latino Comp.	0.09	0.09	--	0.08	0.13 ⁺	--	0.08
Immigrant Comp.	0.01	--	0.10 ⁺	0.02	--	0.16***	0.09
Catholic	--	0.04	0.04	0.04	0.04	0.04	0.04
Private (non-Cath)	--	0.03	0.03	0.03	0.04	0.03	0.03
Urban	--	0.06*	0.06**	0.05*	0.06*	0.06**	0.06*
Northeast	--	0.02	0.01	0.01	0.02	0.01	0.02
South	--	0.08**	0.08***	0.08**	0.08**	0.08***	0.08***
West	--	-0.02	-0.01	-0.02	-0.02	-0.01	-0.02
Interactions (Immigrant*_____)							
Agg. SES (std)	--	--	--	--	-0.09***	-0.08**	-0.09***
Agg. Ability (std)	--	--	--	--	0.10**	0.08*	0.10**
Asian Comp.	--	--	--	--	-0.10	--	-0.15
Black Comp.	--	--	--	--	0.20 ⁺	--	0.19
Latino Comp.	--	--	--	--	-0.02	--	-0.06
Immigrant Comp.	--	--	--	--	--	-0.02	0.07
Variance between institutions (τ)	0.06***	0.03***	0.03***	0.03***	0.03***	0.03***	0.03***
Between-institution variance explained	76.9%	88.5%	88.5%	88.5%	88.5%	88.5%	88.5%

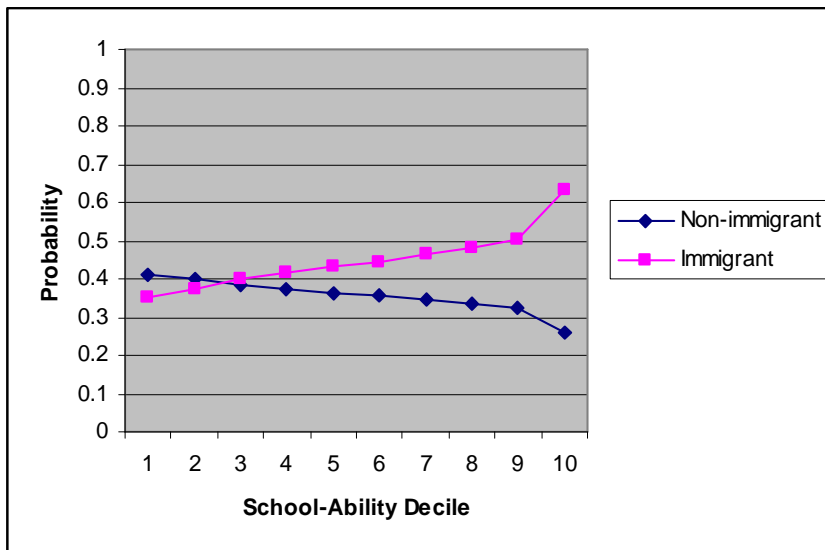
Note: ***p<.001; **p<.01; *p<.05; ⁺p<.10; Complete details for these models (including all level-1 variables) are available upon request.

Figure 1. Probability of Expecting a Graduate or Professional Degree, by School-SES and Immigrant Status



Note: Probabilities calculated from logit coefficients from Model 7 with other values set to zero.

Figure 2. Probability of Expecting a Graduate or Professional Degree, by School-SES and Immigrant Status



Note: Probabilities calculated from logit coefficients from Model 7 with other values set to zero.

Appendix

Table A. Descriptive Statistics for Variables

Variable	Variable Description	Mean	Std Dev	Range Low, High
LEVEL 1 (N=10,851)				
Expect Graduate or Professional Degree	Binary dependent variable (1= expect to complete a Master's, professional degree, or PhD; 0 = expect less than completion of a Master's degree)	0.36	0.48	0,1
Immigrant	Dummy variable (1= child of at least one immigrant parent; 0= non-immigrant)	0.18	0.39	0,1
Female	Dummy variable (1=female; 0= male)	0.51	.50	0,1
Asian	Dummy variable (1=Asian; 0= non-Asian) (reference category = white)	0.04	0.19	0,1
Latino	Dummy variable (1= Latino; 0= non-Latino) (reference category = white)	0.13	0.33	0,1
Black	Dummy variable (1=Black; 0= non-Black) (reference category = white)	0.12	0.33	0,1
Parental Expectations	Dummy variable (1=at least one parent expects the student to attain a bachelor's degree or higher; 0=no parent expects a bachelor's degree or higher)	0.77	0.42	0,1
Parental Involvement	Factor score representing the involvement that a parent had in the student's high schools life	0.33	0.58	-2.933, 0.689
Peers' plans	Dummy variable (1= most or all of the student's friends plans to attend a four-year college or university; 0= none, few, or some of the student's friends plan to attend a four-year college)	0.54	0.50	0,1

Single parent household	Dummy variable (1= student lives in a household with 2 parents/guardians; 0= student lives in a different family arrangement)	0.22	0.41	0,1
SES (std)	Socioeconomic status of the student's family. (standardized)	0.13	0.98	-2.94, 2.52
Test Score (std)	Composite score of standardized reading and math scores (standardized)	0.17	0.98	-2.99, 3.13

LEVEL 2 (N=747)

Aggregate SES (std)	An aggregate measure of the socioeconomic status of the student body. (standardized)	0.00	1.00	-2.40, 3.36
Aggregate Ability (std)	An aggregate measure of the test scores of the student body. (standardized)	0.00	1.00	-2.64, 3.11
Asian Composition	An aggregate measure from student-level race variables representing the proportion of Asians in the student body.	0.03	0.09	0, 0.84
Black Composition	An aggregate measure from student-level race variables representing the proportion of Blacks in the student body.	0.11	0.22	0, 1.00
Latino Composition	An aggregate measure from student-level race variables representing the proportion of Latinos in the student body.	0.10	0.19	0, 1.00
Immigrant Composition	An aggregate measure from student-level immigrant variables representing the proportion of immigrants in the student body.	0.13	0.19	0, 1.00
Catholic	Dummy variable (1= catholic control; 0= public or non-Catholic private control) (comparison group = public)	0.05	0.22	0,1

Private (non-Catholic)	Dummy variable (1= non-catholic private control; 0= public or Catholic control) (comparison group = public)	0.20	0.40	0,1
Urban	Dummy variable (1= urban school; 0= non-urban)	0.21	0.41	0,1
Northeast	Dummy variable (1= school is in the Northeast; 0= school is not in the Northeast) (comparison group = Midwest)	0.17	0.37	0,1
South	Dummy variable (1= school is in the South; 0= school is not in the South) (comparison group = Midwest)	0.37	0.48	0,1
West	Dummy variable (1= school is in the West; 0= school is not in the West) (comparison group = Midwest)	0.20	0.40	0,1

References

- Alexander, K. L., & Eckland, B. K. (1975). Contextual effects in the high school attainment process. *American Sociological Review*, *40*, 402-416.
- Allison, P. D. (1999). *Multiple regression: A primer*. Thousand Oaks, CA: Pine Forge Press.
- Alwin, D. F., & Otto, L. B. (1977). High school context effects on aspirations. *Sociology of Education*, *50*, 259-273.
- Behnke, A. O., Piercy, K. W., & Diversi, M. (2004). Educational and occupational aspirations of Latino youth and their parents. *Hispanic Journal of Behavioral Sciences*, *26*(1), 16-35.
- Bell, D. (1973). *The coming of post-industrial society: A venture in social forecasting*. New York: Basic Books.
- Bills, D. B. (2004). *The sociology of education and work*. Malden, MA: Blackwell Publishing, Inc.
- Cabrera, A. F. (1994). Logistic regression analysis in higher education. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. 10, pp. 225-256). New York: Agathon.
- Cabrera, A. F., & La Nasa, S. M. (2001). On the path to college: Three critical tasks facing America's disadvantaged. *Research in Higher Education*, *42*(2), 119-150.
- Campbell, R. T., & Alexander, C. N. (1965). Structural effects and interpersonal relationships. *American Journal of Sociology*, *71*, 284-289.
- Carter, D. F., Fernández, S. D., & Locks, A. M. (2006, November 3). *Social structural factors affecting African American, Latino, Asian American, and white students' college aspirations*. Paper presented at the Association for the Study of Higher Education (ASHE), Anaheim, CA.
- Centra, J. A. (1980). Graduate degree aspirations of ethnic student groups. *American Educational Research Journal*, *17*, 459-478.
- Crosnoe, R., & Lopez-Gonzalez, L. (2005). Immigration from Mexico, school composition, and adolescent functioning. *Sociological Perspectives*, *48*, 1-24.
- Davis, J. (1966). The campus as a frog pond: An application of the theory of relative deprivation to career decision of college men. *American Journal of Sociology*, *72*, 17-31.
- Enders, C. K., & Tofighi, D. (in press). Centering predictor variables in cross-sectional multilevel models: A new look at an old issue. *Psychological Methods*.
- Erisman, W., & Looney, S. (2007). *Opening the door to the American dream: Increasing higher education access and success for immigrants*. Washington D.C.: Institute for Higher Education Policy.
- Ethington, C. A. (1997). *A hierarchical linear modeling approach to studying college effects*. New York: Agathon Press.
- Fox, J. (1991). *Regression diagnostics*. Thousand Oaks, CA: Sage.
- Frost, M. B. (2007). Texas students' college expectations: Does high school racial composition matter? *Sociology of Education*, *80*(1), 43-65.
- Goldsmith, P. A. (2004). Schools' racial mix, students' optimism, and the black-white and Latino-white achievement gaps. *Sociology of Education*, *77*, 121-147.
- Gonzalez, G. C. (2005). *Educational attainment in immigrant families: Community context and family background*. New York: LFB Scholarly Publishing LLC.

- Goyette, K., & Xie, Y. (1999). Educational expectations of Asian American youths: Determinants and ethnic differences. *Sociology of Education*, 72, 22-36.
- Hamrick, F. A., & Stage, F. K. (1998). High minority enrollment, high school-lunch rates: Predisposition to college. *The Review of Higher Education*, 21(4), 343-357.
- Hao, L., & Bronstead-Bruns, M. (1998). Parent-child differences in educational expectations and the academic achievement of immigrant and native students. *Sociology of Education*, 71, 175-198.
- Hauser, R. M., Sewell, W. H., & Alwin, D. F. (1976). High school effects on achievement. In W. H. Sewell, R. M. Hauser & D. L. Featherman (Eds.), *Schooling and achievement in American society* (pp. 309-341). New York: Academic Press.
- Hoelter, J. W. (1982). Segregation and rationality in black status aspiration processes. *Sociology of Education*, 55(1), 31-39.
- Horn, L. J., & Carroll, C. D. (1997). *Confronting the odds: Students at risk and the pipeline to higher education* (NCES 98-094). Washington DC: National Center for Educational Statistics (NCES).
- Hossler, D., Braxton, J. M., & Coopersmith, G. (1989). Understanding student college choice. In J. C. Smart (Ed.), *Higher education: Handbook of theory and research* (Vol. V, pp. 231-288). New York: Agathon Press.
- Hossler, D., & Gallagher, K. S. (1987). Studying student college choice: A three-phase model and the implications for policy-makers. *College and University*, 2(3), 207-221.
- Jaccard, J. (2001). *Interaction effects in logistic regression* (A Sage University Paper No. 135). Thousand Oaks, CA: Sage.
- Jensen, L. (2001). The demographic diversity of immigrants and their children. In A. Portes & R. G. Rumbaut (Eds.), *Ethnicities: Children of immigrants in America* (pp. 21-56). Berkeley, CA: University of California Press.
- Kao, G., & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly*, 76(1), 1-19.
- Khattab, N. (2005). The effects of high school context and interpersonal factors on students' educational expectations: A multi-level model. *Social Psychology of Education*, 8, 19-40.
- Little, A. (1978). *The occupational and educational expectations of students in developed and developing countries* (Education Report No. 3). Stockholm: Institute for Development Studies.
- Lopez, D. E., & Stanton-Salazar, R. D. (2001). Mexican Americans: A second generation at risk. In A. Portes & R. G. Rumbaut (Eds.), *Ethnicities: Children of immigrants in America* (pp. 57-90). Berkeley, CA: University of California Press.
- Luke, D. A. (2004). *Multilevel modeling* (A Sage University Paper No. 143). Thousand Oaks, CA: Sage.
- Marjoribanks, K. (2002). Family background, individual and environmental influences on adolescents' aspirations. *Educational Studies*, 28(1), 33-46.
- Marsh, H. W. (1991). Failure of high-ability high schools to deliver academic benefits commensurate with their students' ability levels. *American Educational Research Journal*, 28(2), 445-480.
- Meyer, J. W. (1970). High school effects on college intentions. *The American Journal of Sociology*, 76(1), 59-70.
- Michael, J. A. (1961). High school climates and plans for entering college. *The Public Opinion Quarterly*, 25(4), 585-595.

- Morse, A. (2002). *Demographics and the 2000 census: A quick look at U.S. Immigrants*. Washington DC: National Conference of State Legislatures Retrieved. October 24, 2006, from <http://www.ncsl.org/programs/immig/demographics2000census.htm>
- Myers, R. (1990). *Classical and modern regression with applications* (2nd ed.). Boston: Duxbury Press.
- Paulsen, M. B., & St. John, E. P. (2002). Social class and college costs: Examining the financial nexus between college choice and persistence. *The Journal of Higher Education*, 73(2), 189-236.
- Perna, L. W., & Titus, M. A. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *The Journal of Higher Education*, 76(5), 485-518.
- Porter, S. R. (2005). What can multilevel models add to institutional research? In M. A. Coughlin (Ed.), *Applications of advanced statistics in institutional research* (pp. 110-131). Tallahassee: Association for Institutional Research.
- Portes, A., & Hao, L. (2004). The schooling of children of immigrants: Contextual effects on the educational attainment of the second generation. *Proceedings of the National Academy of Sciences*, 101(33), 11920-11927.
- Portes, A., & Rumbaut, R. G. (2006). *Immigrant America: A portrait* (3rd ed.). Berkeley, CA: University of California Press.
- Portes, A., & Rumbaut, R. G. (Eds.). (2001). *Legacies: The story of the immigrant second generation*. Berkeley, CA: University of California Press.
- Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants. *Annals of the American Academy of Political and Social Sciences*, 530(November), 74-96.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R., & du Toit, M. (2004). *HLM 6: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International, Inc.
- Roberts, J. K. (2007, April 10). *Group dependency in the presence of small intraclass correlation coefficients: An argument in favor of not interpreting the ICC*. Paper presented at the Annual meeting of the American Educational Research Association, Chicago, IL.
- Ruiz-de-Velasco, J., & Fix, M. (2000). *Overlooked & underserved: Immigrant students in U.S. Secondary schools*. Washington D.C.: The Urban Institute.
- Rumbaut, R. G., & Portes, A. (Eds.). (2001). *Ethnicities: Children of immigrants in America*. Berkeley, CA: University of California Press.
- Runciman, W. G. (1966). *Relative deprivation and social justice: A study of attitudes to social inequality in twentieth-century England*. Berkeley: University of California Press.
- Schneider, B., & Stevenson, D. (1999). *The ambitious generation: America's teenagers, motivated but directionless*. New Haven, CT: Yale University Press.
- Schwartz, A. E., & Gershberg, A. I. (2000). Immigrants and education: Evidence from New York City. In *Proceedings from the annual meeting of the national tax association* (pp. 125-134). Washington, DC: National Tax Association.
- Sewell, W. H., & Armer, J. M. (1966). Neighborhood context and college plans. *American Sociological Review*, 31(2), 159-168.

- Sewell, W. H., Haller, A. O., & Ohlendorf, G. W. (1970). The educational and early occupational attainment process: Replication and revision. *American Sociological Review*, 35, 1014-1027.
- Sewell, W. H., Haller, A. O., & Portes, A. (1969). The educational and early occupational attainment process. *American Sociological Review*, 34, 82-92.
- Shavit, Y., & Williams, R. A. (1985). Ability grouping and contextual determinants of educational expectations in Israel. *American Sociological Review*, 50, 62-73.
- Snijders, T., & Bosker, R. (1999). *Multilevel analysis: An introduction to basic and advanced multilevel modeling*. London: SAGE.
- Spady, W. G. (1976). The impact of school resources on students. In W. H. Sewell, R. M. Hauser & D. L. Featherman (Eds.), *Schooling and achievement in American society* (pp. 185-223). New York: Academic Press.
- Spenner, K. I., & Featherman, D. L. (1978). Achievement ambitions. *Annual Review of Sociology*, 4, 373-420.
- St. Hilaire, A. (2002). The social adaptation of children of Mexican immigrants: Educational aspirations beyond junior high school. *Social Science Quarterly*, 83, 1026-1043.
- St. John, E. P., Paulsen, M. B., & Carter, D. F. (2005). Diversity, college costs, and postsecondary opportunity: An examination of the financial nexus between college choice and persistence for African Americans and whites. *The Journal of Higher Education*, 76, 545-569.
- St. John, N. (1975). *School desegregation: Outcomes for children*. New York: Wiley.
- Stage, F. K. (2007). Answering critical questions using quantitative data. In F. K. Stage (Ed.), *New directions for institutional research: No. 133. Using quantitative data to answer critical questions* (pp. 5-16). San Francisco: Jossey Bass.
- Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences* (4th ed.). Hillsdale, NJ: Erlbaum.
- Suárez-Orozco, C., & Suárez-Orozco, M. (2001). *Children of immigration*. Cambridge, MA: Harvard University Press.
- Suárez-Orozco, M. (2006, November 3). *Migration and education in the global era*. Paper presented at the Association for the Study of Higher Education 31st Annual Conference, Anaheim, CA.
- U.S. Census Bureau. (2005). American community survey. Retrieved October 24, 2006, from <http://factfinder.census.gov/>
- Waldinger, R. (Ed.). (2001). *Strangers at the gates: New immigrants in urban America*. Berkeley, CA: University of California Press.
- Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy*. Chicago: University of Chicago Press.
- Yogev, A., & Ilan, Y. (1987). Does self-esteem affect educational aspirations? The case of the ethnic enclave. *Urban Education*, 22(2), 182-202.