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The Effects of Immigration on Academic Achievement in the United States

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ABSTRACT

This paper reports research on the gaps in academic achievement between first, second, and third-generation students in the American schooling system. The relationship between generation status and academic success was observed using the Educational Longitudinal Survey (ELS) Sophomore Cohort of 2002. Academic success, measured by high school completion and postsecondary attendance, is influenced by the institutional contexts, social capital, and human capital differences amongst immigrant and native students. In my findings, there are differences in postsecondary attendance. Using the results of chi-square, t-tests, and logistic regression analyses, my research shows that second-generation students outperform those in the third and higher generation once I control for social and human capital and institutional factors.

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Introduction

Second-generation students in the United States can have a more challenging transition into the American schooling system because of cultural differences experienced in their households compared to their schools and communities in the United States. Second-generation immigrants can be identified as people born in the United States within a family of first-generation immigrant parents. First-generation immigrant parents refer to individuals who have grown up outside of U.S. culture, experiencing different cultural norms and academic expectations from their country of origin. The 1.5 immigrant generation was born outside of the U.S. but grew up within the country.

It is essential to consider why families migrate to the United States. First-generation immigrants may move to the United States to explore the American Dream, “a belief that there is a fair chance of succeeding and ample opportunities to do so” (Clark, 2003). Under this dream, immigrants come to the United States to gain more success than they would have in their native countries. First-generation immigrant parents who have children in the United States (second-generation immigrants) may raise their families with the societal norms of their home country. This could negatively affect second-generation students raised in American institutions because cultural differences may create challenges. For second-generation students, growing up in households with non-American practices, such as having a foreign language spoken at home, may interfere with their success as U.S. students.

For this project, I have first-generation students in the data: students born outside the United States. These are compared to second-generation students who are U.S. born but raised

by immigrant parents. These two groups can then be compared to third and higher generations—students born in the United States to parents who are also born in the United States. I can determine factors that interfere with a student's academic success by exploring these social groups. I want to compare these groups because I believe second-generation immigrant students will have different academic experiences because of household differences in ethnicity, language, and cultural norms. Students whose parents are from the United States may have an easier time in school because they have been fully immersed in American culture and institutions, have English as a first language, and more.

Academic success or performance represents a student's accomplishments in specific instructional environments, such as high school or university. These achievements include but are not limited to, scholarships, honor roll awards, and access to higher education. These achievements demonstrate how students have accomplished their learning goals, which can translate into professional career opportunities. To achieve academic success, students must perform well in their classes and gain transferable skills for future endeavors. However, academic success is greatly influenced by academic attitudes. This is because if a student's learning environment does not suit their needs, students may develop negative feelings towards learning, thus affecting their success in education. Throughout my research, I will consider academic attitudes and how they encourage or discourage students from doing well in the classroom.

The academic trajectory of achievement is reflected in a student's social environment. Glick and White (2003) examined that immigrant families tend to hold different household norms compared to U.S. families. This can negatively affect a second-generational student's success in the American schooling system. These household experiences may include the lower

socioeconomic status of immigrant families, non-English speaking backgrounds, and ethnic differences that bring about discrimination. These things should be considered for a second-generational immigrant's ability to communicate and work well in a classroom environment.

Because immigrants experience different household norms, second-generational student who feels different from their academic peers may develop negative attitudes toward education. This is because it can be discouraging not to do as well or to not look like the other American students in the classroom. In a recent article by Chantal Hailey (2022), surveys were used to explore racialized schools and their effects on minority students. Through a survey conducted in New York, the authors find that racial composition heterogeneously affects students' willingness to attend school. As discussed in the results of this article, Hailey finds that White and Asian students show a strong racialized preference for white schools, while the Latinx and Black student communities preferred mixed schools. Hailey's research supports the idea that attitudes toward education change based on racialized academic experiences are supported.

Using the Educational Longitudinal Survey (ELS) Sophomore Cohort of 2002, I will observe the relationship between status as a second-generation immigrant student and academic success. Second-generation immigrants are identified with a variable indicating generation status. This variable includes respondents from first, second, and third-generation immigrants, allowing me to observe and compare differences across immigrant generations. The analyses focus on second-generation students because they have immigrant parents. However, unlike first-generation who also have immigrant parents, second-generation students may have more favorable academic experiences.

To measure academic achievement, I will use the variables of high school completion and postsecondary enrollment status as my dependent variables. I expect that there will be variations

within the dependent variables, as students' attitudes regarding learning and school will further lead to their success in education. Attitudes surrounding education can be measured by the variable, parents' academic expectations for their students. This variable considers the survey respondents' aspirations and beliefs for their students, covering the educational and professional culture.

In order to understand the factors that help explain differences in postsecondary attendance, I will use the independent variables of social capital, human capital, and institutional backgrounds. I hypothesize that second-generation students will lack opportunities to obtain a high school degree due to barriers to language, parents' educational backgrounds, and many other factors. Because of these barriers, immigrants will have a negative attitude towards education, thus impacting their ability to obtain a high school or higher education degree.

This topic of cultural influence on academic achievement is essential in the social sciences domain. It is crucial to consider the different experiences second-generation immigrants may have that impact one's academic achievement, as ethnicity, language, and income frequently affect one's ability to succeed in the American schooling system. Research on this topic will help build analysis to produce reliable knowledge about collaborating and relating to universal educational experiences.

To guide my research, I will use the foundational questions "Does familial immigration from a foreign country to the United States explain the educational variation of second-generation immigrant children?" and "Do generation status differences in education outcomes depend on ethnicity, language, and income?"

Conflicting Findings

While I hypothesize that immigration will have negative implications for academic success, there is already existing data suggesting that the foreign-born adult population has similar levels of college education as the native U.S. population. However, adult education does not tell us whether immigration during adolescence or parents' immigration influences student success in the United States.

The U.S. Department of Education used data from the proportion of "New Americans" in the United States and found that among adults aged 25 and older, recent data indicate that bachelor's degree attainment rates of foreign-born and native-born residents were similar—29% vs. 31% (Arbeit, Staklis & Horn, 2016). This differs from my expected outcomes for my research, as I infer that immigration will cause more significant differences in educational attainment. However, knowing the education levels of the overall adult population is not informative for understanding the pathways immigrant students follow if they are in the United States before adulthood.

There is more variation by nativity at lower levels of education. For example, 16% of foreign-born residents obtained some college education, compared with 27% and 29% of second and third-generation Americans (Arbeit, Staklis & Horn, 2016). These findings suggest differences from my expected research—but these findings do not consider when immigrants came to the U.S. or how those who attend school in the U.S. perform over time.

Literature Review

Institutional Context

Immigration is the process of moving over national borders to live somewhere other than the country of origin. In this research, I study one outcome of immigration, namely, children of immigrants' academic success. Many immigrant parents' decision to migrate comes from a desire to raise their children in the United States. Many foreigners choose to come to the United States for the country's social, economic, and cultural benefits, but there can be many other motives. While the United States is historically known to be the land of prosperity, immigrants have often been discriminated against in societal structures. These institutional contexts of exclusion towards foreigners take away opportunities for immigrants to grow in educational and labor settings.

In the sociology of education, schools are critical institutional contexts. The role of schools in social stratification is often questioned, as education can be used to rise above a parent's socioeconomic status, or education can be thought to reinforce the existing societal inequalities. The understanding of schools as an institutional context is essential for my research because "many school processes exist that may favor children from advantaged families, [and] there are likely other processes that favor the disadvantaged" (Downey, 2019). The causal relationship between second-generation immigrants and academic success can be explained by understanding the role of institutional contexts.

In a research article by Charles Hirschman, the author explores the age of immigration in the United States and what foreign-born persons experience in American culture. Hirschman argues that the U.S. offers excellent economic opportunities for its citizens, as "many immigrants without a high school degree can work in the skilled construction industry, nursing homes caring

for the elderly, and in the service sectors in restaurants, hotels, and gardening" (Hirschman, 2014). While these labor opportunities offer economic prosperity, immigrants face unequal educational opportunities in the United States. Hirschman explains how, on average, immigrant families have less education than native-born Americans because they are expected to perform low-pay, high-work jobs (Hirschman, 2014). This signifies the lack of assimilation of immigrants into American culture, impeding educational opportunities.

Assimilation, in terms of immigration, is the process of being fully integrated into American society. Assimilation has several dimensions, including "socioeconomic standing, residential segregation, language use, and intermarriage" (Waters & Jiménez, 2005). Suppose an immigrant's experiences in these aspects are not comparable to a native U.S. resident's. In that case, that immigrant may not be fully assimilated—suggesting immigrants are not fully assimilated into the mainstream or dominant social structures.

Immigrant incorporation into American culture has been a challenge for native U.S. citizens. According to Flippen and Farrell-Bryan's literature review, there needs to be more accepting of immigrants in American society. With the review of the literature, Flippen and Farrell-Bryan observe the perception that immigrants are a threat to American labor. This is because contemporary immigrants are racialized as non-white and subject to both interpersonal and institutional discrimination:

"Hailing from Latin America, Asia, and Africa, immigrants today enter a labor market that is far more bifurcated than that of their European predecessors at the turn of the twentieth century, potentially making social mobility more difficult within and across generations" (Flippen & Farrell-Bryan, 2021). In the United States, immigrants have been historically neglected within labor, housing, and educational structures. This makes it unfair for immigrant families to gain the same successes as native-born American citizens.

To support the claims of unfair institutional experiences for immigrants, Lee and Madyun use data from the Children of Immigrants Longitudinal Study to measure how adverse school environments predict academic success for immigrant students. The authors found that "there are many cases showing that supportive institutional agents often serve as a catalyst in promoting the chances of academic success and thereby social mobility" (Lee & Madyun, 2018). Often, marginalization and discrimination deter immigrant students from building these critical relationships with institutional agents. This leads immigrant students to refrain from academic engagement and performance.

Survey data from Latino young adults in California supports the idea of immigrant status' impact on social mobility. The author, Palter, uses the survey data to explore legal status impacts on high school completion, post-secondary enrollment, and labor market expectations. Palter discusses how noncitizens, undocumented, and documented immigrants face political terrain, as legal status marks exclusion, impacting educational mobility. In the mid-1990s, several laws and policies were implemented further to expand the citizen-noncitizen divide in the United States. These laws "barred lawful permanent residents from most forms of federal assistance, eliminated many existing venues to challenge deportation for all noncitizens, greatly restricted judicial review of immigrant cases, and jettisoned many opportunities for legalization that were previously available to the undocumented" (Palter, 2018). This historical neglect of individuals from outside American culture continues to disrupt social movements for these groups.

Palter continues to discuss these inequalities through theoretical frameworks. These theories propose how immigrant groups will be incorporated into the stratification system. The citizen advantage theory suggests significant differences in the social movement for immigrants who have fully assimilated through citizenship compared to those legal noncitizens. Palter's

results support this theory, as "undocumented immigrants [were] doing worse, academically than all other legal status groups" (Palter, 2018). With legal status as a significant predictor of educational outcomes, access to citizenship is vital to the success of immigrant families.

Social Capital

Immigration and social capital differences have created segregation in educational settings, impacting students' willingness to attend and do well in school. As stated by James S. Coleman, social capital is "productive, making possible the achievement of certain ends that in its absence would not be possible" (Coleman, 1988). For example, Glick and White (2003) examine how generational status predicts student performance variations on sophomore baseline exams. Using longitudinal data on adolescents in U.S. schools, the authors find that social capital is conducive to a student's success in school: "Deficits suffered by immigrants in the form of poor English-language proficiency or lack of familiarity with the host community could be mitigated by higher levels of parental support and strong family ties" (Glick & White, 2003). The academic achievement trajectory is reflected through a second-generation student's social environment and strong social capital—household structure, language background, and ethnicity.

Social environments play a prominent role in students' shaping of substantial social capital. Cultural discontinuity is a big part of developing an immigrant student's social capital. *Cultural discontinuity* is "a school-based behavioral process where the cultural value-based learning preferences and practices of many ethnic minority students—those typically originating from home or parental socialization activities—are discontinued at school" (Tyler et al., 2008). This can cause struggles for students from foreign households, as language and cultural barriers may interfere with their success in the American schooling system.

Research from Cholewa and West-Olatunji explains how cultural discontinuity is a root cause of underachievement in school for immigrant students. As described in their study, the American schooling system promotes a worldview based on Eurocentric values. Educators tend to neglect cultural diversity within the schooling system, as "curricular activities often benefit those students whose cultural backgrounds most closely align with Eurocentric norms, thus creating a cultural mismatch for culturally diverse students" (Cholewa & West-Olatunji, 2008). With a lack of understanding of diversity and cultural differences in the United States, second-generation students need help adapting to American schools' expectations.

With cultural discontinuity comes many setbacks for culturally diverse students. Immigration has created differences in educational settings, impacting students' willingness to attend and do well in school. Recent data from Emily Greenman assess generational changes in attitudes and behaviors towards educational outcomes. The academic trajectory of achievement depends on a student's attitudes regarding education. Greenman chooses to explain this through the *Immigrant Optimism Theory*. This theory suggests that "immigrant parents come to the U.S. with very high levels of motivation to succeed and optimism about their children's life chances, which they pass onto their children" (Greeman, 2013). However, the author suggested that later immigrant generations, such as the second generation, lose the beneficial attitudes and behaviors toward schooling because they have faced negative experiences in institutional contexts. This, in turn, may hurt a later generation's academic achievement. This demonstrates how attitudes reflect social capital and how assimilation into a new culture may impede an immigrant student's success in the academic world.

The *Immigrant Optimism Theory* can further be explained through research by Grace Kao and Marta Tienda. This research aims to promote the understanding of the continuation rates of

ethnic minorities in post-secondary education and labor market trajectories. Using the National Educational Longitudinal Study of 1988, the authors found that there are significant behavioral differences between immigrant and native parents, and these differences create influences over immigrant and native youth academic performances. These differences include but are not limited to language and financial barriers. Because immigrant parents are disadvantaged due to their lack of cultural cohesion, they hold themselves and their children to higher standards for academic achievement (Kao & Tienda, 1995).

Human Capital

Human capital is important when considering immigration status and academic success. Gary Becker defines human capital as “activities that influence future monetary and psychic income by increasing resources in people” (Becker, 1994). To further define this concept, human capital can be thought of as things individuals possess to increase their value, for example, knowledge. Human capital is highly valued when considering someone’s success. For immigrant families, human capital is valuable for generating more human capital in the next generation, furthering academic success.

The Wisconsin Model can measure human capital and how it affects social mobility. This model was created to consider social-psychological factors that may predict societal status attainment, as the investment of human capital is thought to generate more human capital. An example of this could be pursuing higher education. If an individual obtains a bachelor’s degree, then that investment in human capital will lead to more human capital through labor experiences.

The variables included in the Wisconsin Model are occupational and educational attainment, forms of social capital—occupational and educational aspiration, academic performance, income,

and mental ability (Alexander, 1975). These are all important to acknowledge when predicting societal trajectories for immigrants because the investment in human capital leads to further attainment.

A part of the Wisconsin Model recognizes the direct influence of those constantly involved in the subject's life. This means that family influences an individual's goals for social attainment. When considering a second-generation immigrant's level of academic success, the Wisconsin Model suggests that a parent's involvement will have a direct influence. In a cross-sectional study by Pamela Davis-Kean, parents' education and income were observed to relate to children's academic achievement. The author hypothesized that "parents' education influences child achievement indirectly through its impact on the parents' achievement beliefs and stimulating home behaviors" (Davis-Kean, 2005). The pattern of results was consistent with her hypothesis that parents' schooling and family income positively influence a child's academic achievement. This supports the idea that parents have interpersonal influence over a child's aspirations.

To further explore the concept of human capital and its influence on immigrant academic success, the level of parent education should be considered when observing an immigrant student's academic goals and achievements. In the article "Parents' Education and Children's Educational Aspirations and Achievements," the authors explore the impact fathers and mothers have on their child's academic goals through their level of attainment. The research shows the "father's education has a slightly stronger effect than mother's education on perceived parental encouragement, college plans, college attendance, and college graduation for males, but that both father's and mother's education has almost equal effect for females" (Sewell & Shah, 1968).

This signifies the correlation between parents and their children regarding educational attainment, but it also suggests gender differences in the academic world.

A national representative sample can be used to identify these gender differences in academic success. Authors Qian, Buchmann, and Zhang use the Educational Longitudinal Study to observe gender differences in the context of immigrant generational status and racial differences. The authors found that “second-generation Hispanic boys, but not girls, have lower grades than their coethnic native counterparts, and first-generation black boys, but not girls, earn higher grades than their native peers” (Qian, Buchmann, & Zhang, 2018). These results were partially explained through class preparedness and the student’s attitudes, which can be inferred from the student’s social capital and socioeconomic status.

Another aspect of human capital that should be considered when interpreting immigrant academic success should be family economic status. Historical trends have revealed that low-income families face academic setbacks:

“Among children who were adolescents in the late 1960s, test scores in the reading of low-income children lagged behind those of their better-off peers by four-fifths of a standard deviation—about 80 points on an SAT-type test. Forty years later, this gap was 50 percent larger, amounting to nearly 125 SAT-type points” (Duncan & Murnane, 2016).

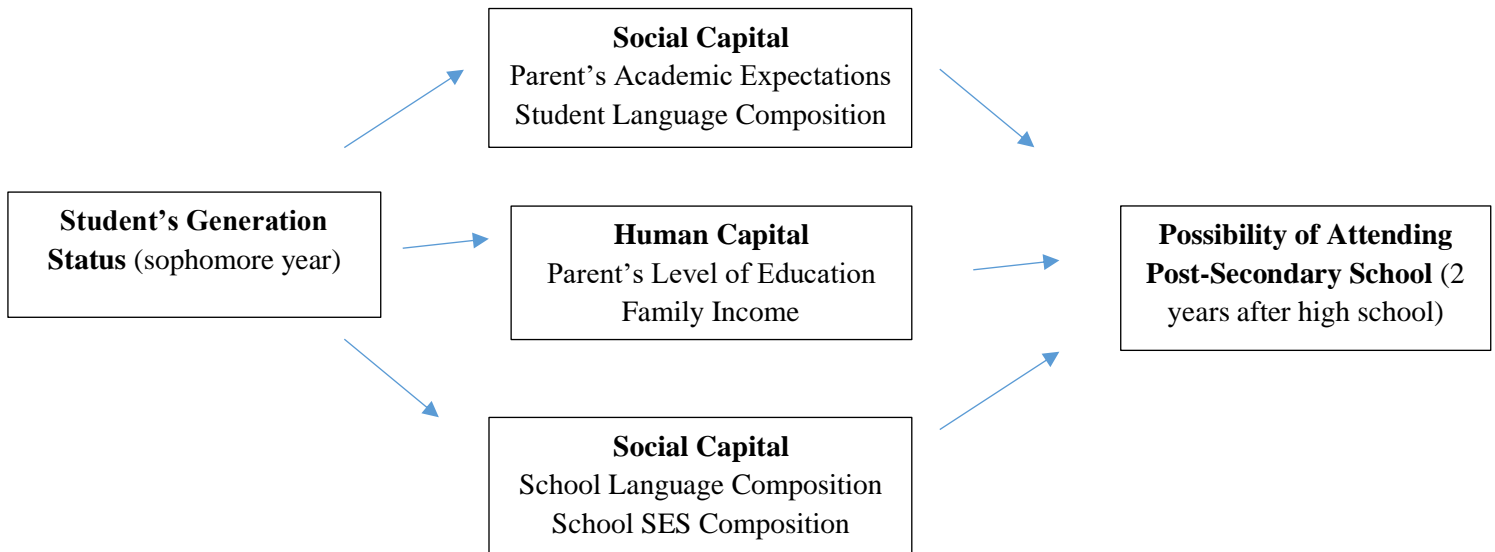
The reason for income being a determinant of academic success may have many factors. Duncan and Murnane view familial and institutional factors in a causal relationship with income and academic success. High-income families spend more time with their children, and affluent families have more opportunities for high-quality education (Duncan & Murnane, 2016). So, if immigrant and second-generation youth come from low-income families, this will explain why they have lower educational attainment. These rising inequalities in human capital negatively impact immigrant students’ academic trajectories.

Formal Hypotheses

1. Familial immigration to the United States will be negatively associated with academic success such that second-generation students will not be as likely to complete high school or move on to post-secondary education as opposed to students whose parents are born in the U.S.
2. American schooling culture's institutional contexts will negatively impact second-generation students' academic success by impeding their social mobility compared to students whose parents were born in the U.S.
3. The difference in academic success between second-generation students and their peers with American-born parents can be partially explained by the difference in social capital available.
4. Lower human capital among second-generation students will partially explain the gap in their academic success when compared to students whose parents are born in the U.S.

Figure 1.

The conceptual framework for these hypotheses is demonstrated in Figure 1 below:



Methods

For my research, I am using the Education Longitudinal Study of 2002 (ELS) to compare variables to examine my hypotheses. The ELS provides perspectives and insights into the American schooling system by surveying students, their parents, teachers, and school administrators. The data are ideal for my purposes because they are longitudinal. Longitudinal data are good because they allow us to observe individual changes over time and consider initial conditions and later outcomes in the correct order. When first observing the target population, the students are sophomores in high school (2002). By 2004, these students are seniors in high school. For the year 2004, I observed the post-secondary trajectories of the target population. Following up with post-secondary attendance, I observed two years after 2004 and determined post-secondary attendance in 2006.

The dependent variable for my research is post-secondary attendance. The measure is categorical because it can only assume a fixed number of possible values. I compare post-secondary outcomes for students from three-generation status groups. I use these groups to test my hypotheses that students from immigrant families (first and second generation) will be less likely to obtain higher education degrees than students born in the US to US-born parents (third+ generation).

The independent variables for my research were organized by three frameworks: institutional context, social capital, and human capital. All of these variables were produced from the ELS of 2002, indicating the high school environment to which the students were exposed. To measure institutional contexts, I selected two variables—school socioeconomic status and school language composition. Using these two variables, I have observed the importance of academic environments and how they influence a student's progress in school. To demonstrate whether

there are differences between student generation status and the school's socioeconomic status, I use the percentage of students who receive free lunch. I use a chi-square test to demonstrate whether these differences are statistically significant. School language composition is measured with a continuous variable of the percentage of students who are English language learners in the school. I rely on a t-test to demonstrate differences across generational groups.

A t-test determines whether the variable of interest affects the population or if the two groups differ. When comparing descriptive statistics between groups, the NCES reports test the differences between estimates for statistical significance using the student's t statistic. Statistical significance is determined by calculating t values for differences between pairs of means or proportions and comparing these t values with published values of t for two-tailed hypothesis testing, using a five percent probability (a significance level of 0.05).

To measure the social capital variable, I used the categorical variables of students' native language composition and parents' academic expectations for when their students were in high school. These social capital variables provide an understanding of the circumstances that may impede an individual's academic success. Because these variables are categorical, they were statistically measured through a percentage distribution and chi-square.

The human capital variable was measured through the variables of parents' highest level of education and total family income. By interpreting these two variables, I have considered the generational impact of family attributes on a student's academic success. These independent variables were measured as categorical, thus allowing me to perform a percentage distribution and chi-square to produce the significance.

Alongside my independent variables, I have used several control variables to ensure that the results were produced by comparing my independent and dependent variables. These control

variables consisted of measuring race, gender, and family composition. These variables have been considered contributing factors to an individual's academic trajectory.

I used statistical tests of percentage distributions, chi-squares, and a multivariate regression model to analyze the data. These statistical tests allow us to answer if there is a relationship between the variables and the direction of the relationship. With these analyses, I have identified which variables impact the topic of interest—post-secondary attendance.

Results

To test the statistical significance of each focused variable, I performed chi-square tests to determine if the dependent variable of post-secondary enrollment is independent of the other variables. By doing so, I produced the p-value for each variable, determining the statistical significance of the relationship between the variables. If the p-value is less than 0.05, the variable is statistically significant. If the p-value is less than 0.01, the variables pass an even higher threshold for statistical significance. Thus, I determine if a statistically significant difference exists in the independent and control variables for students from different generation status groups. Table 1 includes the descriptive statistics for each variable by generation status (ELS Sophomore Cohort).

I compare the proportion of students in each generation status group attending post-secondary institutions after high school. This is my dependent variable, and most students attended a post-secondary institution, with the highest percentage among the second generation (88.41%). However, there is no statistically significant difference without controls or independent variables. There is a significantly greater likelihood that students in the second generation attend post-secondary education than the reference group (third and higher-generation

students; Odds ratio = 1.873; $p < 0.01$). Second-generation students are more likely to attend college when I control individual and family-level capital.

Table 1. Summary statistics for ELS Sophomore cohort, by generation status.

	1st Generation	2nd Generation	3rd Generation	Significance
Dependent Variable				
Post-Secondary Enrollment				0.61
<i>No PS Enrollment</i>	16.4%	11.59%	14.62%	
<i>Some PS Enrollment</i>	83.6%	88.41%	85.38%	
Independent Variables				
Parent's Level of Education				0.09
<i>Did Not Finish High School</i>	26.14%	21.6%	3.81%	
<i>Graduated High School</i>	19.36%	24.49%	26.85%	
<i>Did Not Finish PS Degree</i>	12.74%	12.33%	16.9%	
<i>Received PS Degrees</i>	41.76%	41.58%	52.45%	
Family Income				* <0.01
<i>\$25,000 or Less</i>	42.41%	30.03%	17.94%	
<i>\$25,001-\$75,000</i>	44.23%	50.89%	53.35%	
<i>\$75,001 or More</i>	13.36%	19.07%	28.71%	
Parent's Academic Expectations				* <0.01
<i>High School or Less</i>	8.58%	7.15%	11.89%	
<i>Some College</i>	14.09%	19.01%	27.13%	
<i>Graduate from College</i>	77.32%	73.84%	60.98%	
Family Language Composition				* <0.01
<i>(English)</i>				
<i>Yes</i>	22.96%	51.33%	92.27%	
<i>No</i>	77.04%	48.67%	2.73%	
School SES Composition				0.15
<i>(Receive Free School Lunches)</i>				
<i>Under 75%</i>	88.47%	89.32%	95.56%	
<i>Over 75%</i>	11.53%	10.68%	4.44%	
				* <0.05

School Language Composition				
Control Variables				
Sex				0.86
<i>Female</i>	52.3%	48.53%	49.8%	
<i>Male</i>	47.7%	51.47%	50.2%	
Race/Ethnicity				*<0.01
<i>White</i>	17.25%	18.76%	71.51%	
<i>Hispanic</i>	49.84%	50.38%	7.67%	
<i>Black</i>	8.1%	7.68%	14.95%	
<i>Asian, Native Amer., Other</i>	24.82%	23.17%	5.88%	
Family Composition				0.97
<i>Mother & Father</i>	59.81%	62.52%	56.63%	
<i>Parent & Partner</i>	14.22%	13.87%	17.07%	
<i>Single Parent</i>	20.73%	19.84%	22.38%	
<i>Other</i>	5.23%	3.77%	3.92%	

Using the statistics from each chi-square, I can determine the p-values that four of the nine variables were statistically significant—race, family income, parent's academic expectations, and student language composition. Table 1 demonstrates that second-generation students have different human and social capital levels compared to third and higher generations.

Race was statistically significant out of the control variables, with a p-value less than 0.05. First and second-generation students are more racially and ethnically diverse than third and higher-generation students. Less than 20% of first and second-generation students are non-Hispanic White compared to over 70% of third and higher-generation students. This is a statistically significant difference. As for sex and family composition, there is not a statistically significant difference. There is little to no difference amongst generations and gender, and most families, across first, second, and third generations, include and mother and father in the household.

Family income, parents' academic expectations, and student language composition were statistically significant for the independent variables. Across the generational status, the first generation reported less family income than the higher generations. For the second and third generations, more than half reported making more than \$25,000. Notably, first-generation youth are more likely to come from families with meager incomes (42% have family incomes of \$25,000 or less). This is a statistically significant difference at $p < 0.001$.

These disadvantages among students of immigrant parents may keep them from attending post-secondary school at the same levels as their third+ generation's peers. The regression results show that the second generation is more likely to go to college once this disadvantage is controlled. The results in Table 1 are helpful because they show that these disadvantages are significant. The regression results in Table 2 show us that these differences matter because only once we control for them can we tell that the second generation does better—in other words, the second generation is more likely to go on to post-secondary school if they have the same advantages as the third generation.

More than half of the student's parents expected them to graduate from college across all generations. However, third-generation students have lower parental expectations than first or second-generation students. This means the parents, mainly immigrant parents, held high expectations for their students. There is a statistically significant difference ($p < 0.001$) indicating immigrant parents (i.e., parents of first and second-generation students) have higher academic expectations when compared to non-immigrant parents. In the variable measuring student language composition, almost 100% of third-generation students have English as their native language. In contrast, more than half of first-generation students do not have English as their native language. This is a statistically significant difference ($p < 0.001$).

While some independent variables were statistically significant, parents' level of education and school socioeconomic status were not. Third-generation students' parents are most likely to complete post-secondary degrees and least likely not to complete high school. At the same time, first and second-generation students' parents show similar trends in their level of education. Over 25% of parents of first-generation youth have less than a high school education, and 21% of second-generation youth have parents with less than a high school education. Although this is not statistically significant with a 0.05 significance level, these results are statistically significant if the threshold is widened ($p < 0.10$).

Comparing the percentage of students receiving free school lunches is a way to compare the socioeconomic status of the school's students attend. Across all three generations, the majority of students attend schools where fewer than 75% of the students receive free lunch. Although more first-generation students attend schools where more than 75% of the students receive free school lunches (11.5% vs. 10.7% and 4.4%), there is not a statistically significant difference. However, the difference between third and higher-generation students and first and second-generation students combined is likely statistically significant because fewer than 5% of third and higher-generation students attend schools where more than 75% receive free lunch.

I performed a logistic regression to explore further the statistical significance between the independent and dependent variables. This statistical model is used to estimate the probability of an event taking place; In this case, the model predicts the probability that students in the ELS dataset go on to post-secondary education in the two years following their senior year of high school. The odds ratio defines the likelihood of an event taking place. If the odds ratio is more significant than one, it indicates an increased occurrence of an event. If the odds ratio is less than one, it indicates a decreased occurrence of an event. The results also include the p-value to

demonstrate the statistically significant variables. Once again, I rely on a p-value of $< .05$ to conclude. Using the results from the logistical regression model, I can determine whether there is support for my hypotheses:

Table 2. Logistic regression for ELS Sophomore cohort, by generation status.

	Odds Ratio	P-value
Generational Status Reference group: 3rd Gen.		
1st Gen.	1.29	0.47
2nd Gen.	2.17	<0.01
Family Composition Reference group: Other		
Mother and father	1.00	0.10
Parent and partner	0.65	0.18
Single parent	0.87	0.70
Total Family Income Reference group: \$75,001 or more		
\$25,000 or less	0.35	<0.01
\$25,001-\$75,000	0.59	0.05
Parent's Academic Expectations Reference group: Graduate from college		
High school or less	0.23	<0.01
Some college	0.51	<0.01
Parent's Level of Education Reference group: Received PS degree		
Did not finish high school	0.42	<0.01
Graduated from high school	0.45	<0.01
Did not complete PS degree	0.70	0.06
School SES Composition Reference group: Over 75%		
Under 75%	1.01	0.98
School Language Composition Percent of 10th graders who have limited or no English proficiency	0.99	0.12
Family Language Composition Reference group: No		

Yes	1.40	0.21
Race/Ethnicity Reference group: Asian, Native Amer., Other		
White	1.55	0.13
Black	1.72	0.11
Hispanic	1.43	0.29
Sex Reference group: Female		
Male	0.57	<0.01

This model supports the first hypothesis that immigrant generation status is essential. In this hypothesis, I expected that immigration to the United States would negatively impact an immigrant student's academic success. In the full logistic regression model, second-generation students are more likely to go on to postsecondary school than third and higher (Odds Ratio = 2.16; $p < 0.05$). This confirms that the generation status' of immigrants plays a role in postsecondary aspirations and attendance.

While support was found for my first hypothesis, I partially found support for my second hypothesis. My second hypothesis is that the institutional contexts in America negatively impact second-generation students' academic success by impeding their social mobility. The variables of school socioeconomic status and school language composition measured institutional contexts. In the logistic regression table, school socioeconomic status does not significantly predict attendance in a postsecondary institution (Odds Ratio = 1.01; $p > 0.05$). As for school native language composition, the t-test results suggest that this variable was statistically significant ($p < 0.05$).

However, I support my third hypothesis, where I expect social capital to predict postsecondary attendance. In this hypothesis, I expected that the difference in social capital could partially explain the difference in academic success between immigrant and native students. To

account for social capital, the variables of parents' academic expectations and students' native language were used. The statistical significance could be seen within the logistic regression, as parents with lower expectations have kids who are less likely to go on to postsecondary education (Odds Ratio = 0.22 & 0.51; $p < 0.05$). In the logistic regression table, no support shows that family language background matters—students from non-English homes are not significantly more or less likely to go on to postsecondary school (Odds Ratio = 1.39; but $p > 0.05$). Similarly, it can be noted that going to high school, where more children come from non-English backgrounds, is not a significant predictor of postsecondary attendance (Odds Ratio = 0.958; $p > 0.05$).

For the final hypothesis that states that second-generation students obtain a lower human capital, there was statistically significant support to prove it true. The two variables used to measure human capital were the parent's highest level of education and family income. The parent's highest level of education was statistically significant in the logistic regression with a p-value of 0.01. Students whose parents have the lowest education categories are less likely to attend postsecondary education. This variable was also statistically significant for family income with a p-value of 0.01. Both of these variables are positively associated with postsecondary attendance.

While support was not found for all my hypotheses, there were statistically significant results for the control variables of gender and race. The variable gender, while having an odds ratio of less than one, had a p-value less than 0.05, making it statistically significant. In these findings, boys are less likely to attend college than girls (Odds ratio for boys is less than 1; $p < 0.05$). The variable race has an odds ratio greater than one but a p-value greater than 0.05. This is not consistent with the findings. It was found that, once I controlled everything else in the

model, there were no statistically significant differences in the probability of attending postsecondary school for students from different racial and ethnic backgrounds.

Discussion

To reiterate, my research was guided by two foundational questions: “Does familial immigration from a foreign country to the United States explain the educational variation of second-generation immigrant children?” and “Do generation status differences in education outcomes depend on ethnicity, language, and income?” To explore these questions, I used four main hypotheses: That second-generation immigrants are less successful academically (measured by postsecondary attendance), that institutional contexts will impede second-generation student’s academic success, that social capital can explain the academic differences between second-generation students and American students, and second-generation students with low human capital can explain the gap in academic success. I found support for some but not all hypotheses using chi-square tests, t-tests, and logistic regression analysis.

Table 1 demonstrates the descriptive statistics produced from the chi-square tests. These tests produced the p-value, which measures the statistical significance of each variable. By running these statistical tests, I could verify whether the variables were significant or not. Out of the control variables, race was statistically significant, demonstrating that the racial and ethnic composition of the three-generation status groups is quite different. The third and higher generation comprises non-Hispanic primary whites, whereas students from immigrant families (i.e., the first and second generation) are more racially and ethnically diverse.

Nevertheless, it is important to point out that in the models where I control for this racial and ethnic diversity, students in the second generation are more likely to go on to postsecondary education. For the independent variables, family income, parents’ academic expectations, and

student language composition were all statistically significant, with p-values less than 0.05.

These results suggest that family income, parents' academic expectations, and student language composition are closely related to generation status.

Table 2 demonstrates the logistic regression of all the variables used in the research. By observing the odds ratio and p-values, I tested four hypotheses. The results of this table support my first and third hypotheses, but I do not find support for the second and fourth hypotheses.

The findings from my research can be related to the literature used to describe institutional contexts, social capital, and human capital. As stated by Flippen and Farrell-Bryan, racial discrimination comes into play in institutional contexts, as individuals who lack citizen status in America do not experience the same labor and academic opportunities as American citizens. High school students born in the United States are citizens. In the logistic regression model, they are likelier to go on to postsecondary education than students who are not born in the United States (i.e., first generation) and are less likely to be citizens. With the statistical significance of the race and ethnicity control variable, this research was supported because immigrants of color do not receive the same treatment as individuals whose family is native to the United States. Only after controlling for race and ethnicity can we see this more favorable outcome for second-generation students.

As for social capital, literature was used to describe the Immigrant Optimism Theory, which addresses the attitudes of older generations regarding success in America. Kao & Tienda explain how immigrant parents hold expectations for their children to succeed academically, and this research was consistent with my findings. The parents' academic expectations variable in the chi-square test and logistic regression was statistically significant. This means that immigrant parents expect their children to succeed academically.

Human capital was measured with the variables of parents' education and family income. In the literature review, it was described by Gary Becker states that human capital is something individuals may possess to increase their value as a person. In immigrant families, human capital is produced from generation to generation, making parents' education and family income predictors for student success. In the findings from Table 1 and Table 2, parent education and income are positively associated with postsecondary attendance, confirming that these factors matter for students' academic success.

Conclusion

To conclude, I have researched the relationship between immigrant generation status to academic success. I used independent variables of institutional contexts, social capital, and human capital to measure this relationship. By doing so, I could compare factors that impede student success. With an independent variable of generational status, I found that these factors impact different generations of immigrants differently. Using the descriptive statistics in Table 1, I find that each variable of institutional contexts, social capital, and human capital produced different outcomes by generation status. I also used control variables of gender, race, and family contexts to consider other aspects affecting academic achievement. I hypothesized that second-generation immigrants would be less likely to complete high school and pursue postsecondary degrees due to the differences in institutional contexts, social capital, and human capital that immigrants may face compared to students who are native to America. Although some research suggests immigrant students are less successful in high school, my earlier descriptive look at this found no difference in high school completion among first, second, or third-generation students in the ELS dataset. However, I did find differences in postsecondary attendance. Once I controlled for social capital, human capital, and institutional factors, I found that second-

generation students outperform those in the third+ generation. These findings describe the resilience of second-generation students despite their lower access to resources

APPENDIX

Figure 1.

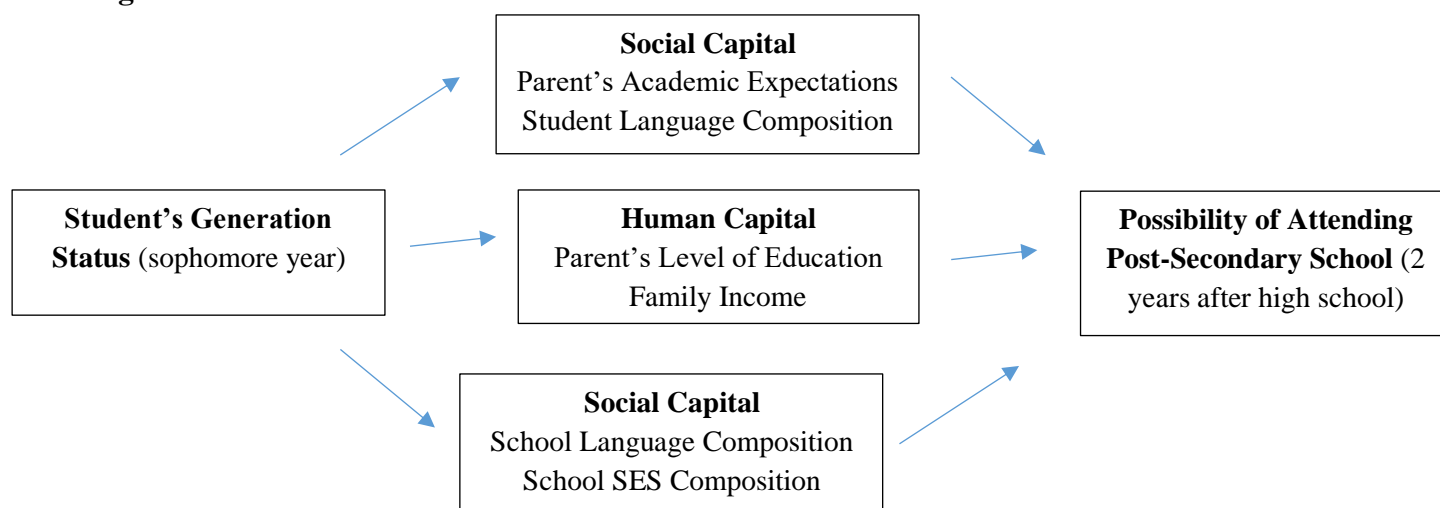


Table 1. Summary Statistics for ELS Sophomore Cohort, by generation status.

	1st Generation	2nd Generation	3rd Generation	Significance
Dependent Variable				
Post-Secondary Enrollment				0.61
<i>No PS Enrollment</i>	16.4%	11.59%	14.62%	
<i>Some PS Enrollment</i>	83.6%	88.41%	85.38%	
Independent Variables				
Parent's Level of Education				0.09
<i>Did Not Finish High School</i>	26.14%	21.6%	3.81%	
<i>Graduated High School</i>	19.36%	24.49%	26.85%	
<i>Did Not Finish PS Degree</i>	12.74%	12.33%	16.9%	
<i>Received PS Degrees</i>	41.76%	41.58%	52.45%	
Family Income				*<0.01
<i>\$25,000 or Less</i>	42.41%	30.03%	17.94%	
<i>\$25,001-\$75,000</i>	44.23%	50.89%	53.35%	
<i>\$75,001 or More</i>	13.36%	19.07%	28.71%	
Parent's Academic Expectations				*<0.01
<i>High School or Less</i>	8.58%	7.15%	11.89%	
<i>Some College</i>	14.09%	19.01%	27.13%	
<i>Graduate from College</i>	77.32%	73.84%	60.98%	

Family Language Composition (English)					
Yes	22.96%	51.33%	92.27%		* <0.01
No	77.04%	48.67%	2.73%		
School SES Composition (Receive Free School Lunches)					
Under 75%	88.47%	89.32%	95.56%		0.15
Over 75%	11.53%	10.68%	4.44%		
School Language Composition					* <0.05
Control Variables					
Sex					
Female	52.3%	48.53%	49.8%		0.86
Male	47.7%	51.47%	50.2%		
Race/Ethnicity					
White	17.25%	18.76%	71.51%		* <0.01
Hispanic	49.84%	50.38%	7.67%		
Black	8.1%	7.68%	14.95%		
Asian, Native Amer., Other	24.82%	23.17%	5.88%		
Family Composition					
Mother & Father	59.81%	62.52%	56.63%		0.97
Parent & Partner	14.22%	13.87%	17.07%		
Single Parent	20.73%	19.84%	22.38%		
Other	5.23%	3.77%	3.92%		

Table 2. Logistic regression for ELS Sophomore Cohort, by generation status.

	Odds Ratio	P-value
Generational Status		
Reference group: 3rd Gen.		
1st Gen.	1.29	0.47
2nd Gen.	2.17	<0.01

Family Composition Reference group: Other Mother and father Parent and partner Single parent	1.00 0.65 0.87	0.10 0.18 0.70
Total Family Income Reference group: \$75,001 or more \$25,000 or less \$25,001-\$75,000	0.35 0.59	<0.01 0.05
Parent's Academic Expectations Reference group: Graduate from college High school or less Some college	0.23 0.51	<0.01 <0.01
Parent's Level of Education Reference group: Received PS degree Did not finish high school Graduated from high school Did not complete PS degree	0.42 0.45 0.70	<0.01 <0.01 0.06
School SES Composition Reference group: Over 75% Under 75%	1.01	0.98
School Language Composition Percent of 10th graders who have limited or no English proficiency	0.99	0.12
Family Language Composition Reference group: No Yes	1.40	0.21
Race/Ethnicity Reference group: Asian, Native Amer., Other White Black Hispanic	1.55 1.72 1.43	0.13 0.11 0.29

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ACADEMIC VITA

EDUCATION

The Pennsylvania State University (PSU)

*College of the Liberal Arts | Bachelor of Arts in Sociology | Minor in CAS
Schreyer Honors College*

Class of 2023

PROFESSIONAL EXPERIENCE

College of The Liberal Arts

University Park, PA

Peer Advisor

August 2021 – Present

- Works as a mentor for incoming first-year students through guiding mentees through academic and social troubles.
- Gives presentations at First-Year Student Seminars and speaks about personal experiences as a Liberal Arts Student.
- Holds office hours several times a week to aid students in class work and extracurriculars.

Student Orientation and Transitions Programs

University Park, PA

New Student Orientation (NSO) Leader

May 2022 – Aug 2022

- Welcomed 9,000+ first-year students to PSU campus by leading them through educational programs about college transitions.
- Facilitated dialogues about important topics of DEI and responsible decision making to help improve the Penn State community.
- Spoke in front of 380 parents and families in a Q&A style panel to assure families of their student's success

Heathmere Center for Cultural Engagement

Beverly, MA

Nevins Fellow (Intern)

May 2021 – Jul 2021

- Directed and promoted dialogues along the North Shore for social justice issues and promoted unity within the Beverly community.
- Built networks with potential programming partners.

Brookdale Senior Living

Durham, NH

Activities Assistant

Jun 2020 – Aug 2020

- Found the importance of working 1 on 1 with residents through individual visits and providing entertainment by playing games such as black jack and cribbage.

Receptionist

Jun 2019 – Aug 2019

- Answered and returned phone calls to partnering businesses and resident families to communicate important messages to the management team at Brookdale.

- Gained customer service experience through answering phones, checking people in/out, and connecting residents to their families.

LEADERSHIP AND INVOLVEMENT

ServeState

University Park, PA

Service Coordinator

Dec 2019 – May 2022

- Created diverse volunteer events through partnerships with Hershey Gardens, Krislund Camp, and many more to attract and engage student volunteers, accumulating to more than 4,000+ hours of collective community service per semester (served for four semesters).
- Presented information regarding service events to the 200+ general body members, and kept count of each members hours throughout the semester.

Dancer Relations THON Committee

University Park, PA

Diversity, Equity, and Inclusion Chair

Sep 2021 – Feb 2022

- Conducted dialogues surrounding the importance of community inclusion, understanding, and empathy in relation to Penn State's THON.

Operations THON Committee

University Park, PA

Team Builder

Sep 2020 – Feb 2021

- Assembled activities for committee members to encourage personal connections.

Rhetoric and Civic Life

University Park, PA

Teaching Assistant

Aug 2020 – May 2021

- Graded and overlooked the classwork from Schreyer Honors students in CAS 137H and CAS 138H.
- Presented my submissions on speech and writing assignments through holding office hours and giving examples during class time.

HONORS, SKILLS, AND INTERESTS

Honors: Dean's List (6/7), ServeState Humanitarian Award, Phillips Exeter Academy Academic Honors

Skills: Working Knowledge in Microsoft Office (PowerPoint, Word, Teams, and Excel), Facilitation, and Public Speaking

Interests: Conventional Participation and Deliberation, Demography, Outdoor Athletics (Skiing, hiking, boating), Fashion/Beauty