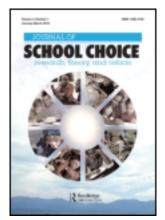
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# Students' Search Behaviors in the Context of High School Choice: Variation by Nativity, Country of Origin, and Academic Track

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# Students' Search Behaviors in the Context of High School Choice: Variation by Nativity, Country of Origin, and Academic Track

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This article discusses the results of a series of multiple regressions performed to predict how closely 490 eighth grade students' approaches to searching for and selecting high schools matched the New York City Department of Education's recommendations. Results indicate that children of Latin American immigrant mothers were less likely to follow the New York City Department of Education's recommendations than both their third-generation or higher peers and students born to Asian immigrant mothers. They relied on fewer information sources, attended fewer open houses and fairs, were less likely to consider academic factors, and consulted fewer people when choosing schools.

KEYWORDS students, high school choice, equity

#### INTRODUCTION

Researchers, policy-makers, and educators alike have identified persistent racial/ethnic and income-based educational "opportunity gaps" as some of the most pressing educational and social justice issues of our time (Berliner, 2006; Klein & Sharpton, 2009; Noguera & Wing, 2006; Rothstein, 2004). The latest results from the National Assessment of Educational Progress (NAEP) showed substantial racial/ethnic and class-based disparities in primary and secondary grades students' literacy and mathematics proficiency with higher income and White and Asian students far outperforming their low income

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and Black and Latino peers (National Center for Education Statistics [NCES], 2011b). In addition, Latino and Black youth have been found to be significantly more likely to drop out of school (NCES, 2009), and Latino students who do make it to postsecondary education are overrepresented in two-year colleges and have comparatively low college completion rates (Kelly, Schneider, & Carey, 2010; NCES, 2011a; Taylor, Fry, Wang, Dockterman, & Velasco, 2009).

These educational patterns are raising alarm about the effectiveness of the public education system to prepare all students for the twenty-first century and integrate and educate large and growing numbers of immigrant-origin students (Gándara & Contreras, 2009; C. Súarez-Orozco, Súarez-Orozco, & Todorova, 2008; M. Súarez-Orozco & Sattin, 2007). Given that children of Latin American immigrants comprise the fastest-growing segment of the school-age population in the United States and are expected to account for 22% of the nation's college-age population by 2020 (Kelly et al., 2010), questions about how to address obstacles to Latino immigrant students' access to high quality educational opportunities and to their academic achievement have moved to the forefront of educators', researchers', and policy-makers' agendas (Capps et al., 2005; Gándara & Contreras, 2009; Kelly et al., 2010; C. Súarez-Orozco et al., 2008; M. Súarez-Orozco, Súarez-Orozco & Sattin-Bajaj, 2010).

Increasingly, students and parents are being given the opportunity, or, in some cases required, to make choices about which public school to attend, in part, to address these intractable problems in education. Districts across the United States have adopted school choice with vigor in recent years as part of a broader set of market-based educational reform strategies purportedly designed to improve school quality while simultaneously increasing educational equity for all students. According to the Education Commission of the States (2011) and the Center for Education Reform (2011), 42 states and the District of Columbia have charter school laws, and all but four states have some form of interdistrict or intradistrict open enrollment policy.

Due to its growing importance in the national educational landscape, school choice has become and will continue to be a salient part of many students' educational experiences. Yet, the voice of the student has been virtually silent in the large body of school choice literature. Instead, most school choice research relies on data collected from parents. Furthermore, almost no consideration has been given to the relationship between parents' or students' nativity and school choice participation or experiences.

By contrast, the college choice literature is dominated by investigations of late adolescents' school search behaviors and choice preferences (Cabrera & La Nasa, 2001; Hurtado, Inkelas, Briggs, & Rhee, 1997; McDonough, 1997; Perna, 2000; Teranishi, Ceja, Antonio, Allen, &

McDonough, 2004). Researchers have been able to explain a significant amount of variation in students' college choices as a function of family socioeconomic status (Cabrera & La Nasa, 2001; Callendar & Jackson, 2008; Hossler & Stage, 1992; McDonough, 1997; Paulsen & St. John, 2002); parents' education (Conley, 2001; Hossler & Stage, 1992; Lopez-Turley, Santos, & Ceja, 2007); school context (Gándara, 1995; Hill, 2008; McDonough, 1997; Roderick et al., 2008), peers (Gibson, Gándara, & Koyama, 2004; Perez & McDonough, 2008; Riegle-Crumb, 2010); and students' academic preparation (Hossler, Schmit, & Vesper, 1999). Yet, the education community continues to be puzzled by the large number of students—particularly youth of color—who enroll in less selective colleges than they are qualified to attend, a phenomenon that Bowen, Chingos, and McPherson (2009) have termed "undermatching" (Bowen et al., 2009; Roderick et al., 2008) and by the sizable gaps in college completion rates by income-level and race/ethnicity (NCES, 2011a).

The expansion of school choice at the primary and secondary levels represents a valuable opportunity to empirically explore students' approaches to and perspectives on school search and selection processes at an earlier stage. Research conducted on student choice also may allow for early identification of barriers to understanding, access to information or supports that may contribute to students' making less informed or less optimal educational choices at every level. This in turn may provide insight into patterns of student application and enrollment in postsecondary educational institutions and indicate potential points of intervention.

To that end, in this article the results of an original survey of students' experiences with the mandatory high school application process in New York City are analyzed and discussed. The survey, which was administered anonymously to 490 first- and second-generation children of Asian and Latin American immigrants and a comparison group of African American and third-generation<sup>1</sup> or higher eighth grade students, was developed to help answer questions about how children of immigrants searched for and chose high schools in New York City, how their choice behaviors varied by student and mother nativity, country of origin, and academic track, and how similar their search behaviors were to those which the school district had publicly recommended. The article focuses on the results of a series of regressions predicting how closely respondents' approach to high school search and selection approximated the New York City Department of Education's recommendations and how the degree of similarity varied based on student and parent nativity, country of origin, and academic track. The discussion considers the equity implications of larger or smaller gaps between students' approaches to school choice and the district's behavioral "standard" that correlate with certain background characteristics.

## SCHOOL CHOICE AND SEARCH BEHAVIORS

Questions related to parents' search behaviors, their sources of information about schools, and their school preferences have long been of interest to scholars of school choice. Studies have found sizable differences among parents in terms of the information they use to make school choice decisions and where they look for it. On average, lower-income, less-educated parents have been found to rely heavily on school-based sources of information and on formal channels such as the radio, newspaper, and television (Andre-Becheley, 2005; Schneider, Teske, & Marschall, 2000; Teske, Fitzpatrick, & Kaplan, 2007), while parents with higher education levels and greater social capital (Coleman, 1988) depend more on social, professional, or informal information networks (Lareau, 2003; Schneider et al., 2000; Teske et al., 2007; Teske, Schneider, Roch, & Marschall, 2000). Additionally, Black and Latino parents tend to use school-based and formal informational outlets with greater frequency and depend less on friends, family, or social contacts than White parents (Schneider et al., 2000). Conversely, regardless of class or race/ethnicity, all parents consistently name academic factors (variably understood as teacher quality, high test scores, or small class sizes) as the most important school characteristic they consider (Buckley & Schneider, 2007; Hamilton & Guin, 2005; Martinez, Godwin, & Kemerer, 1996; Schneider et al., 2000).

In contrast to the robust scholarship on parent choice, there is a scarcity of research on students' school choice behaviors at the primary and secondary school levels. The few studies that explore youth's academic choices and decision-making focus on selection of courses, choice of thematic programs or of "schools within a school" in high school (Crosnoe, Riegle-Crumb, Field, Frank, & Muller, 2008; Lee & Ready, 2007). Despite the considerable growth of school choice in recent decades, little is known about how students negotiate these policies and make school selections. There is much to be learned from the extant literature on late adolescents' college choice experiences (Cabrera & La Nasa, 2001; McDonough, 1997; Perna, 2000; Teranishi et al., 2004); however, the transition to high school is a distinct developmental stage (Blos, 1979; Erikson, 1963; Fuligni & Hardway, 2004; Neild, Stoner-Eby, & Furstenburg, 2008; Roderick, 1994) to which discreet studies of student choice should be dedicated.

#### HIGH SCHOOL CHOICE IN NEW YORK CITY

As the largest urban school district in the country with a total student enrollment greater than that of 38 states, New York City has been at the center of controversial school reforms for decades (Podair, 2002; Stulberg, 2008).

School choice has been a focal point of education reform and debate in New York for many years (Fleigel & MacGuire, 1993; Hammack, 2010; Schneider et al., 2000). Some form of high school choice has existed in New York City since the 1960s, and today, parents in New York City may participate in choice at every stage of their child's public education from prekindergarten through high school (Lopez, 2004; Ravitch, 1974).

Each year, an estimated 85,000 eighth grade students choose from among 700 programs in approximately 400 public high schools across the city's five boroughs. The size and scope of high school choice in New York City coupled with the fact that all eighth grade students must submit an application in order to attend a New York City public high school make it an ideal site in which to study student choice. Moreover, since studies have found that on average, low-income Latin American immigrants participate less frequently in optional school choice programs than other racial/ethnic groups (Buckley & Sattin-Bajaj, 2011; NCES, 2006), research in New York City provides a unique opportunity to capture a population of students and families often absent from school choice analyses.

The current iteration of New York City's high school choice process, modeled after the residency matching program for American physicians (Abdulkadiroglu, Pathak, & Roth, 2005), was launched in the 2003–2004 school year. The official goals for the new matching formula were to increase the likelihood that a student would be assigned to his or her top choice school and to distribute low-achieving students as evenly as possible across high schools (Hemphill & Nauer, 2009). To that end, the latest revision expanded the number of schools/programs that students could rank on their application to twelve. Beyond differences in size and location, schools and programs vary according to theme/academic focus, eligibility requirements, selection method, student support services, extracurricular activities, and schedule, among other characteristics. Furthermore, there is significant variability in school quality across the district. According to an analysis from the Center for New York City Affairs at The New School (Hemphill & Nauer, 2009), only 38.3% of schools with graduating classes in 2007 had graduation rates of 75% or higher, a figure that drops to 12.6% if the more rigorous graduation requirements are considered.2

The official choice process begins in the fall of eighth grade when each student receives an individualized application form printed with his or her final seventh grade academic marks, his or her seventh grade standardized test scores in reading and math, and yearly attendance. These data determine a student's eligibility for certain "screened" schools and programs that have specific attendance, grades, and test score requirements. Completed applications are due in early December, and students receive their high school assignments ("matches") in early spring unless they are deferred to the supplementary round.

## EQUITY AND CHOICE IN NEW YORK CITY

In light of the dramatic differences in New York City students' chances of graduating based on the high school they attend, the high school choice process stands to produce real "winners" and "losers" among eighth grade participants. Limited data have been made available regarding eighth grade students' choices and high school assignments. However, the few analyses conducted provide scant indication that the high school application process is in fact increasing equity through choice (see Corcoran & Levin, 2011).

Research on eighth grade students' high school assignments by race/ ethnicity in New York City shows that students of color are disproportionately enrolled in low performing schools. In their study of the distribution of students across high schools by Progress Report grades,<sup>3</sup> Meade, Gaytán, Fergus, and Noguera (2009) found that Black and Latino students in New York City were concentrated in high schools that received the worst grades from the city. In addition, Black and Latino students have been consistently underrepresented in the city's most elite public high schools, the so-called "specialized high schools" that require an examination for admission (Medina, 2010). Last, in the most comprehensive statistical analysis of high school choice in New York City to date, Corcoran and Levin (2011) reviewed data on student applications and high school matches between 2005 and 2008 comparing the number of schools students applied to, the types of schools that students ranked highly, and the schools to which students were eventually matched across racial/ethnic groups and by special classifications.

Corcoran and Levin (2011) saw strong demand for a limited number of high performing high schools. Moreover, they found that minority students' first choice schools were higher performing and more racially and economically heterogeneous than the schools to which they were ultimately assigned. In the end, they concluded that "These statistics do show, however, that the high school choice process is limited in its success in integrating students by race, ability, and socioeconomic status, beyond what students experience in earlier years of schooling" (Corcoran & Levin, 2011, p. 219). Thus, their research reveals some limits to high school choice as a lever for increased educational equity as currently implemented in New York City.

Scholars, educators, and advocates place strong emphasis on social stratification and equity concerns related to school choice policies (Ball, 1993; Betts & Loveless, 2005; Brantlinger, 2003; Carnoy & McEwan, 2005; Fuller & Elmore, 1996; Hill, 2002; Rofes & Stulberg, 2004; Wells, Scott, Lopez, & Holme, 2005). Yet, there has been almost no work to date on the relationship between parental nativity and school choice participation from an equity perspective. Instead, the issues of family income and educational background have dominated the field. In fact, few studies of immigrant families and school choice in the United States exist, either from the perspective

of parents or students (see Andre-Becheley, 2005 for one exception). At the same time, however, scholarly attention to diverse aspects of immigrant-origin students' experiences in the American education system has increased considerably in recent years (Fuligni, 1997; Gibson, 1988; Kao & Tienda, 1995; Kasinitz, Mollenkopf, Waters, & Holdaway, 2008; Portes & Rumbaut, 1996, 2001; Schwartz & Steifel, 2006; Suárez-Orozco & Suárez-Orozco, 1995; Suárez-Orozco et al., 2008; Zhou & Bankston, 1998). This article therefore aims to fill gaps in the research on both school choice and immigrant youth and education.

In what follows, student background characteristics (including race/ethnicity, nativity, and mother's country of origin), seventh grade academic performance, and academic track are examined in relationship to student choice behaviors. Specifically, the extent to which any of these factors predicted greater likelihood of following the New York City Department of Education's (NYCDOE) recommendations for school search is analyzed and discussed. The NYCDOE did not require middle schools to provide information, support, or guidance to students and families about how to choose high schools, and the middle school in which this study was conducted provided the bare minimum. Therefore, the survey results also reveal something about how youth understand and participate in high school choice in the absence of explicit instruction and support from school personnel. Furthermore, the diversity of the student sample—in terms of nativity (first, second, and African American/third generation or higher), country of origin, academic performance/track, and parental education permit investigation of whether certain students or groups of students are more or less likely than others to engage in search behaviors that approximate the NYCDOE's ideal when controlling for school-based provision of information.

#### DATA SOURCES

## Middle School Site

This article uses data collected as part of a mixed-methods study designed to examine and compare how low-income first- and second-generation children of Latin American and Asian immigrants and African American students make school choice decisions. The study combined ethnographic observation, document analysis, interviews, and survey research in order to triangulate data and develop a more complete picture of how students and families in one middle school experienced high school choice. The research took place between September 2008 and June 2010 at a New York City middle school ("IS 725") that is theoretically representative of the types of middle schools that the study's focal populations generally attend (see Orfield & Lee, 2005): large (approximately 2,100 students in grades six through eight), historically low-performing (only 45.2% of students scoring at proficiency

on New York State mathematics exam in 2008–2009), high poverty (81% of students qualified for free lunch in 2009–2010), high concentration of minority students (98.2% non-White), and large population of English language learners (37.9%). The school's predominantly Latino student body (80% "Hispanic" according to NYCDOE figures) was composed primarily of first- and second-generation children of Latin American and Caribbean immigrants from the Dominican Republic, Mexico, and Ecuador.

The school housed a Spanish bilingual program, a Chinese bilingual program, and a district-wide "gifted and talented" program that required students to take an intelligence test for admission. The school's 12% "Asian" population thus consisted of mostly newly arrived Chinese immigrant students in the bilingual track and second-generation children of Pakistani, Bengali, Indian, Chinese, and Korean origin concentrated in the "gifted and talented" track. The remaining 6% "Black" students included African American children born to native-born parents as well as students of West Indian and African origin. Finally the "White" student population consisted of both first- and second-generation children from Eastern Europe and the former Soviet Union.

## Ethnographic Observations

Ethnographic observations of city-wide informational events related to the high school choice process were conducted between June 2008 and December 2010 at different school locations in Queens, Brooklyn, the Bronx, and Manhattan. Observations took place at ten events over the course of the study including open parent meetings, workshops about how to fill out the high school application, and high school fairs hosted by district and borough representatives of the NYCDOE. These observations provided details about the various district-wide communication efforts and shed light on NYCDOE officials' expectations of choice participants' search behaviors and their recommendations for how to make effective school selections.

# Document Analysis

The NYCDOE publishes a series of printed and electronic materials about the high school choice process which were analyzed as part of the study. The 600-page *Directory of New York City Public High Schools* that is distributed to each rising eighth grade student as well as five short brochures and pamphlets that summarize different school types and offer tips to parents about how to work with their children to select high schools were included in the document analysis. Consideration of the type of media used (e.g., electronic vs. print), its accessibility (language, technological requirements), the content of the information provided, and the criteria emphasized in how to determine appropriate school selections factored into the analysis of these

materials. Particular attention was paid to the list of suggested activities for parents and students and the expectations, both articulated and implied, of parents' roles in the application process.

## Survey Instrument

The original survey was composed of 34 questions designed to capture three key elements of students' choice behaviors: their sources of information utilized, their reasons for selecting schools, and the people with whom they consulted when making school choice decisions. After a series of basic demographic and background questions about the respondent's academic track, seventh grade achievement, nativity, parents' nativity and parents' education, the survey asked students to identify their sources of information about the high school choice process, indicate the factors they considered when selecting schools, and name the people involved in their high school decisions. Using responses to questions focused in these three main areas—information sources, choice factors, and influential people—a dependent variable ("NYCDOE search standard score") was constructed to represent the NYCDOE ideal high school search profile.

The NYCDOE search standard score was calculated by summing those items from the survey that reflected the recommendations found in a range of high school choice publications developed by the NYCDOE. The maximum score was 22. The following nine items from the list of twelve information sources presented in the survey were included in the measure: conversation with guidance counselor; conversation with teacher; school assembly; high school directory; city-wide high school fair; borough-wide high school fair; open house/meeting/audition at a high school; school website or other websites; and conversations with parents/siblings/other relatives. Eleven of the nineteen items from the list of choice factors presented in the survey were included in the measure: distance from home/travel time; school program/theme/career; high school graduation rates; grades you need to get accepted; honors/advanced placement classes offered; sports/clubs/after-school activities; colleges that graduates attend; Progress Report grade; school size; guidance counselor recommendation; and parent/guardian recommendation. A dichotomous variable was created to capture the NYCDOE recommendations about the people who should be involved in students' decisions about high schools. Teacher, guidance counselor, mother, father, and/or guardian were all mentioned in the NYCDOE materials as people with whom students ought to consult; therefore, students who listed at least two out of those five people were given a score of "1" and students who listed fewer than two were given a score of "0." Finally the survey item "My parents asked me about the high schools on my application before they signed it" was dummy coded such that a response of no was assigned a value of 0 and yes was assigned a value of 1.

The calculation of the NYCDOE search standard score for participant number five, an Ecuadoran-born male student in the honors track, can serve as an example of how such calculation was done for all 490 respondents. This student marked yes to three of the nine information sources recommended by the NYCDOE: high school directory, open house/meeting/audition at a high school, and conversations with parents/siblings/other relatives and yes to four of the eleven choice factors: distance from home/travel time; school program/theme/career; high school graduation rates; grades you need to get accepted. He marked yes to only one of the five people mentioned in the NYCDOE materials as potential people to consult (his mother) and was therefore given a score of 0 on the dichotomous variable measuring reliance on people. He indicated that his parents asked questions about the high schools on his application before they signed it and was given a score of one on that item. Based on these responses, participant number five earned a final NYCDOE search standard score of eight, which was slightly below the mean of 8.34 for all respondents.

A respondent's score on this measure does not predict his/her like-lihood of being matched to a high school that was ranked highly on his/her application nor does it reflect satisfaction with his/her high school assignment—two important aspects of students' high school choice experiences that were not captured in the survey. However, this variable serves to indicate the proximity between the NYCDOE's normative expectations of students' and families' engagement in choice and their actual search and selection behaviors. Regressions were run to assess how closely the high school search and decision-making processes of the eighth grade students in the sample matched the approach and strategies recommended by the New York City Department of Education and which student-level factors predicted greater similarity to NYCDOE-endorsed search behaviors.

# Recruitment and Participants

All eighth grade students enrolled in IS 725 at the time of the study were invited to participate in the anonymous paper survey about their experiences choosing high schools in New York City. Slightly over 65% (65.3%) of eighth grade students (N = 490) who were enrolled at the time of the survey administration received written parental permission to participate. Paper surveys were administered to students in either Spanish or English during one 45-minute social studies period between early March and mid-May. Students in the Chinese bilingual class received English surveys, and their teacher orally translated each question into Mandarin at the time of administration. Approximately one third of students completed the survey after they had received the results of the first round of high school "matches," and the remaining two thirds of students completed surveys before the results had been released.

To test for bias in response rates, logistic regression models were used to determine whether the main independent variables of interest—academic track, student country of origin, and mother country of origin-would predict nonresponse. Ultimately, males were found to be underrepresented in the sample (B = .333, SE = .156,  $e^B = 1.396$ , p < .05) despite the fact that they constituted a majority of respondents (52.2% male). This was the case because of an overall gender imbalance (55.6% male) in the larger eighth grade student body. Whereas students in the gifted and talented track (N = 25) and honors track (N = 52) were overrepresented among survey respondents, students in the English-as-a-second language (ESL) were underrepresented (N = 53). Patterns of nonresponse were consistent with earlier findings about females' and higher performing students' tendency to participate in research studies at higher rates than their male and lower performing peers (Dey, 1997; Porter & Whitcomb, 2005). The covariates gender and academic track were included in all analytic models. Neither student county of origin or mother country of origin was found to be a statistically significant predictor of nonresponse, and these variables were also included in statistical models.

Table 1 presents respondents' demographic characteristics and choice behaviors disaggregated by student nativity. Table 2 presents respondents' demographic characteristics and choice behaviors by academic track.

#### Measures

#### MOTHER COUNTRY

Seven country categories were individually dummy coded and represented the respondent's mother's country of birth: United States (7.2%); Mexico (22.9%); Ecuador (19.8%); Dominican Republic (19.2%); Asia (16.1%); Other Latin America or Spanish-speaking Caribbean (10.5%); and Other (4.3%).

#### FIRST GENERATION

First generation was dummy coded such that respondents who were born in the United States were assigned a value of 0 and respondents who were born in a country other than the United States (39.0% of the sample) were assigned a value of 1.

#### ACADEMIC TRACK

Each of the six academic tracks: regular (47.8%), bilingual (20.4%), ESL (10.8%), special education (5.1%), honors (10.6%), and gifted and talented (5.1%) was individually dummy-coded.

TABLE 1 Demographic and Search Variables by Student Nativity

	United States	Dominica	Dominican Republic	Me	Mexico	Ecu	Ecuador	As	Asia	Other Lati	Other Latin America	Other	er
	Third Generation or Higher $(N = 35)$	First Generation $(N = 50)$	Second Generation $(N = 43)$	First Generation $(N = 37)$	Second Generation $(N = 74)$	First Generation $(N = 31)$	Second Generation $(N = 65)$	First Generation $(N = 45)$	Second Generation $(N = 33)$	First Generation $(N = 23)$	Second Generation $(N = 27)$	First Generation $(N = 5)$	Second Generation $(N = 16)$
	W (QS) %	M (SD) %	M (GS) %	M (SD) %	M (GS) %	M (SD) %	M (SD)	M (QS) %	M (SD) %	M (GS) %	(SS) %	M (GS) %	M (SD) %
Gender:	50.0	46.0	53.5	43.2	51.4	45.2	55.4	28.9	59.4	43.5	42.3	40.0	46.7
7th grade math final**	78.77 (11.33)	77.49	75.89 (9.82)	74.58 (9.49)	77.78 (10.44)	77.96 (9.46)	78.02 (13.18)	86.25 (10.36)	89.50	80.74 (9.01)	76.87 (7.07)	77.00 (10.37)	80.87 (8.27)
Number of high school	6.79 (3.07)	3.12 (2.40)	6.05 (2.83)	4.53 (3.12)	5.19 (2.95)	5.13 (2.98)	5.33 (3.31)	5.09 (2.06)	7.03 (3.21)	4.52 (3.45)	6.30 (3.22)	4.6 (3.78)	6.40 (3.52)
applied*** First in family:	2.9	32.0	4.8	35.1	24.3	25.8	21.5	63.6	48.5	26.1	18.5	20.0	6.3
Yes*** Home computer:	88.6	76.0	79.1	64.9	71.6	80.0	81.5	100.0	100.0	78.3	81.5	80.0	93.8
Yes Track***	7		, c	316	0 %	0 20	09	12.6	20 %	0 1,	1 99	009	Ç V
ESL	0.0	18.0	9.3	18.9	14.9	12.9	7.7	18.2	t: 60	4.3	14.8	0.0	0.0
Bilingual	0.0		7.0	48.6	4.1	45.2	6.2	45.5	0	30.4	3.7	20.0	0.0
SPED	11.4		4.7	8.1	4.1	9.7	6.2	0.0	0	0.0	11.1	20.0	0.0
Honors	14.3		7.0	2.7	20.3	6.5	9.2	4.5	24.2	17.4	3.7	0.0	12.5
G&T	2.9	0.0	0.0	0.0	0.0	0.0	1.5	18.2	36.4	0.0	0.0	0.0	12.5
												9)	(Continued)

TABLE 1 (Continued)

	United States		Dominican Republic		Mexico	Ecu	Ecuador	Asia	ia i	Other Latin America	n America	O	Other
	Third Generation or Higher	1	_				Second		Second	First Generation	Second	First Generation	
	(N = 35)	(N = 50)	(N = 43)	(N = 37)	(N = 74)	(N = 31)	(N = 65)	(N = 45)	(N = 33)	(N = 23)	(N = 27)	(N = 5)	(N = 16)
	M (SD) %	M % (SD) %	M (CS) %	M % (SD) %	M (SD) %	M (SD) %	M (CS)	M (SD) %	M (SD) %	M (SD) %	M (SD) %	M (SD) %	M (SD) %
Mother's education**	ν.												
Did not	2.9	34.0	14.0	0 33.3	41.9	25.8	30.8	42.2	18.2	17.4	33.3	20.0	0.0
finish HS Finished HS	25.7	7 8.0	18.6		12.2	16.1	15.4	15.6	24.2	26.1	18.5	0.09	25.0
Some	20.0		11.6	5.6	0.0	12.9	7.7	2.2	15.2	21.7	11.1	0.0	0.0
college Finished	31.4	4 12.0	20.9	0.0	5.4	19.4	9.2	22.2	30.3	21.7	7.4	0.0	37.5
college*	ć					0	`	į	,	6	8	(	ļ
l don't know	20.0	0 36.0	34.9	30.0	40.5	25.8	30.9	17.8	12.1	13.0	29.6	20.0	57.5
Information	4.86	4.26	3.93	3.22	3.80	3.74	3.86	4.20	4.67	3.61	3.93	4.00	4.50
sources**	(2.52)	(2.36)		(1.57)	(1.76)	(1.93)	$\overline{}$			$\overline{}$	(1.77)	(1.87)	(2.07)
Choice	6.11	6.30	5.49	4.51	5.32	5.32	5.08	09.9		5.04		5.00	5.25
factors**	(2.60)	(3.97)	(2.65)	(1.79)	(3.00)	(2.90)	(3.06)		(3.84)	$\overline{}$		(3.94)	(2.05)
Number of	3.00	2.62	3.12	2.43	2.46	3.23	2.97	2.89			2.56	2.80	3.06
beople	(1.70)	(1.32)	(1.35)	(1.19)	(1.41)	(1.52)	(1.57)	(1.13)		(1.42)		(1.10)	(1.84)
helped		(		(1	1	6						6	(
NYCDOE	9.77	8.48	8.42	6.53	7.58	8.00	8.02	8.89	10.79		7.07	9.00	9.53
standard** (3.61)	(3.61)	(3.91)	(3.06)	(2.16)	(2.84)	(3.46)				(3.22)		(3.74)	(2.85)

Note. For continuous variables least square means and significance established with analysis of variance are reported. For categorical variables percentages and significance established with chi-squares are reported.  $\label{eq:potential} *p < .05; **p < .01; ***p < .001.$ 

TABLE 2 Demographic and Search Variables by Academic Track

	Total Sample $(N = 490)$	mple (90)	Regular $(N = 234)$	lar 234)	ESL $(N = 53)$	53)	Bilingual $(N = 100)$	;ual 100)	SPED $(N = 25)$	25)	Honors $(N = 52)$	ors 52)	Gifted & Talented $(N = 25)$	ed &
Variables	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)	%	M (SD)	%
Gender: Female* 7th grade math final***	79.01 (10.94)	47.8	77.97 (10.58)	50.2	74.12 (10.78)	52.8	75.61 (8.14)	34.0	73.56 (7.90)	48.0	87.49	52.0	95.14 (2.88)	64.0
Number of high school applied***	5.32 (3.12)		5.87 (3.14)		4.33 (3.14)		3.56 (2.36)		6.25 (3.58)		6.42 (2.74)		6.10 (2.70)	
First in family: Yes*** Home computer: Yes*** Generation***		26.5		20.2		28.3		39.0 76.8		12.0		21.2		60.9
First		39.0		19.6		54.7		89.0		36.0		20.0		33.3
Second		53.8		70.0		45.3		11.0		48.0		70.0		62.5
Third		7.2		10.4		0.0		0.0		16.0		10.0		2.9
Mother's education***														
Did not finish HS		27.5		25.6		36.5		41.0		20.0		17.3		0.0
Finished HS		18.4		15.4		11.5		16.0		28.0		32.7		29.2
Some college		8.8		9.4		5.8		8.0		4.0		13.5		8.2
Finished college or higher		15.4		14.5		9.6		0.6		16.0		17.3		58.3
I don't know		29.9		35.0		36.5		26.0		32.0		19.2		4.2
Information sources**	4.00 (2.01)		3.97 (1.95)		3.74 (1.85)		3.64 (1.77)		3.96 (1.67)		4.56 (2.40)		5.16 (2.61)	
Choice factors**	5.59 (3.05)		5.25 (2.77)		5.32 (2.79)		5.63 (3.16)		5.72 (3.40)		6.19 (3.24)		7.84 (4.02)	
Number of people helped	2.83 (1.49)		2.79 (1.48)		2.70 (1.60)		2.76 (1.32)		3.00 (1.23)		3.04 (1.77)		3.12 (1.56)	
NYCDOE Standard***	8.34 (3.46)		8.25 (3.19)		7.38 (3.39)		7.43 (3.62)		8.04 (3.72)		9.62 (3.63)		12.70 (3.52)	

Note. For continuous variables least square means and significance established with analysis of variance are reported. For categorical variables percentages and significance established with chi-squares are reported.  $^*p < .05; ^{**}p < .01; ^{***}p < .001.$ 

#### **GENDER**

Gender was dummy coded with male assigned a value of 0 and female (47.8% of the sample) assigned a value of 1.

#### FIRST IN FAMILY

First in family was dummy coded such that respondents who were not first in their family to go to high school in New York City were assigned a value of 0 and respondents who were the first in their family to go to high school in New York City (26.5% of the sample) assigned a value of 1.

#### HOME COMPUTER

Home computer was dummy coded such that not having a computer with Internet access at home was given a score of 0 and having a home computer with Internet access (81.3% of the sample) given a score of 1.

#### SEVENTH GRADE MATH SCORE

Seventh grade math score was the respondent's self-reported average (0-100 grading scale) in mathematics on his/her final report card at the end of seventh grade (M=79.01, SD=10.94). Because the survey was anonymous, self-reported grades were used. This measure of academic performance was used because it is one of the determinants (along with a student's final seventh grade average in English language arts and state standardized test scores) of his/her eligibility for selective high schools and programs that have explicit academic requirements. This survey item had the highest item nonresponse rate (16.9% nonresponse), and as a result, when this variable was used in tests of mean difference or in regression models, the overall sample size dropped. Because item nonresponse came disproportionately from students in the bilingual track (31.0% item nonresponse, 37.3% of total), many of whom enrolled in school in New York City after the end of seventh grade, the missing cases were considered missing at random and therefore not assumed to bias the results.

#### MOTHER EDUCATION

Mother education consisted of five dummy coded categories: did not finish high school (27.5%); finished high school (18.4%); some college (8.8%); finished college or higher (15.4%); and I don't know (29.9%).

#### NUMBER OF HIGH SCHOOLS APPLIED

Number of high schools applied was a continuous independent variable (M = 5.32, SD = 3.12) indicating the number of high schools that the respondent listed on his/her final high school application.

#### INFORMATION SOURCES

Information sources was a count variable based on a composite of the following twelve dichotomously coded items ( $M=4.00,\ SD=2.01$ ): conversation with guidance counselor; conversation with teacher(s); assembly/presentation at school; high school directory; city-wide high school fair; borough-wide high school fair; open house/meeting/audition at a high school; school website or other websites; conversations with friends/classmates; conversations with parents/siblings/other relatives; conversations with current high school students; and after-school activity.

#### CHOICE FACTORS

Choice factors was a count variable based on a composite of the following 19 dichotomously coded items (M=5.59, SD=3.05): school safety; distance from home/travel time; school program/theme/career; high school graduation rates; grades you need to get accepted; it was the zoned school; honors/advanced placement classes offered; sports/clubs/after-school activities; special education or ESL program; colleges that graduates attend; Progress Report grade; online reviews of the school; school size; brother/sister/cousin attends the school; friends attend the school; friends are applying to the school; guidance counselor recommendation; parent/guardian recommendation; and teacher recommendation.

#### PEOPLE HELPED

People helped was a count variable based on a composite of the following twelve dichotomously coded items ( $M=2.83,\ SD=1.49$ ): guidance counselor; teacher; mother; father; friend; brother/sister/cousin; coach; tutor/mentor; religious leader; parent coordinator; other relative; other person. Respondents were also given the option of marking "no one."

#### NYCDOE SEARCH STANDARD<sup>4</sup>

NYCDOE search standard was the primary outcome measure (M = 8.34, SD = 3.46). It was constructed to assess how closely the high school search and decision-making processes of the eighth grade students in the sample matched the approach and strategies recommended by the New York City Department of Education. The NYCDOE search standard score was

calculated by adding those items from the survey that reflected the recommendations found in a range of high school choice publications developed by the NYCDOE. A more complete discussion of how this measure was calculated can be found in the description of the survey instrument above.

## EMPIRICAL ANALYSIS

# OLS Regressions to Predict NYCDOE Search Standard Score

A series of multiple regressions was performed to examine the NYCDOE search standard scores of the eighth grade students in the sample. The results of these analyses are presented in Table 3. In the first model, mother country was entered as the only predictor. In the second step, the respondent's academic track was entered to test whether differences by mother country remained after taking academic track into account. Next, a variable for student nativity was entered in order to determine if being an immigrant student was a source of disadvantage on the final search standard score and if mother country and tracking differences persisted after controlling for student nativity. In the last step the covariates for gender, birth order, home computer, seventh grade math score, and mother education were entered to test how, if at all, the significance of the main effects changed.

The results from the first model presented in column one show that students born to mothers from all countries in Latin America and the Spanish-speaking Caribbean were at a disadvantage compared to their African American/third-generation or higher peers in terms of NYCDOE search standard score. This disadvantage persisted for all students except for those born to Dominican mothers after academic track was entered in step two, although the significance decreased for children of Ecuadoran and other Latin American origin mothers, while it remained highly significant (p < .001) for children of Mexican immigrant mothers. Student nativity was not a statistically significant predictor of respondents' search standard score in the third step. Because third-generation or higher students were captured through the mother country reference category (United States), the dummy variable for first generation served to compare first and secondgeneration students. Thus, after controlling for mother country and academic track no statistically significant differences were found on NYCDOE search standard scores between first- and second-generation students. However, the predictors for Mexican-, Ecuadoran-, and other Latin American-born mothers were still statistically significant in model three indicating that there was a disadvantage associated with being a child of mothers from those countries/regions compared to being a child of U.S.-born mothers regardless of where the respondent was born.

The final column presents the results of the full regression model designed to determine whether respondents' NYCDOE search standard score

**TABLE 3** Comparison of Regression Models Predicting NYCDOE Search Standard Score With Mother Country

Independent Variables	1	2	3	4
Constant	10.07 (.60)***	9.67 (.60)***	9.63 (.60)***	3.46 (1.48)*
Mother Country				
Dominican Řepublic	-1.86 (.71)**	-1.27 (.710)	-1.31 (.722)	-1.11 (.69)
Mexico	-2.84 (.70)***	-2.49 (.69)***	-2.51 (.70)***	-2.06 (.69)**
Ecuador	-1.95 (.70)**	-1.53 (.68)*	-1.56 (.89)*	-1.41 (.67)*
Asia	.394 (.77)	922 (.81)	98 (.82)	-1.13 (.82)
Other Latin America	-2.26 (.79)**	-1.92 (.77)*	-1.97 (.78)*	-1.70 (.75)*
Other	696 (.97)	66 (.94)	70 (.94)	45 (90)
Track				
ESL	_	90 (.56)	94 (.57)	50 (.48)
Bilingual	_	44 (.48)	56 (.54)	19 (.52)
Special education	_	.09 (.84)	.07 (.84)	.60 (.81)
Honors	_	1.56 (.53)**	1.57 (.53)**	.72 (.53)
Gifted & talented	_	4.10 (.90)***	4.10 (.90)***	2.63 (.91)**
First generation	_	_	.149 (.41)	.09 (.39)
Controls				
Gender	_	_	_	1.60 (.31)***
Seventh grade math	_		_	.05 (.02)**
First in family	_	_	_	.24 (.40)
Home computer	_	_	_	1.15 (.43)**
Mother education level	_	_	_	
Finished high school	_	_	_	.63 (.48)
Some college	_	_	_	.51 (.63)
Finished college plus	_	_	_	.07 (.54)
I don't know				80 (.42)
N	476	475	473	387
$R^2$	.097	.171	.172	.284
$\Delta R^2$		.074***	.001	.112***

Note. The numbered columns represent separate regressions which included only those independent variables for which estimates are presented. Mother country, track, and mother education level were dummy coded, with the categories listed in the table compared to a specified reference category. Reference category for mother country was United States, reference category for track was regular, and for mother education was less than high school. First generation was scored 1 = first generation (or foreign-born student), 0 = not first generation (or U.S.-born student). Because third generation was already captured in the model through the reference category for mother country (United States), first generation served to compare first and second generation students. Gender was scored 1 = female, 0 = male; first in family was scored 1 = yes, 0 = no; and home computer was scored 1 = yes, 0 = no. Seventh grade math was student's self-reported final average (0–100 scale) in math at the end of seventh grade. Unstandardized regression coefficients and standard errors (in parentheses) are provided.

\*p < .05; \*\*p < .01; \*\*\*p < .001, two-tailed tests of significance.

could be explained as a function of mother country, academic track, and student nativity after controlling for a set of key covariates. The overall model predicted 28.4% of the variance in NYCDOE search standard scores, and the addition of controls for gender, first in family, home computer, seventh grade math, and mother education produced a statistically significant change in the model ( $\Delta R^2 = .112$ , p < .001). Being female (b = 1.6, SE = .31, p < .001) was associated with a statistically significantly higher score as

was having a home computer with Internet (b = 1.15, SE = .43, p < .01). A respondent's final seventh grade math score also significantly predicted his/her NYCDOE search standard score (b = .05, SE = .02, p < .01).

With all controls and main effects predictors entered, children of Mexican mothers were at the greatest disadvantage (b = -2.06, SE = .69, p < .01) compared to African American/third-generation plus students, followed by their other Latin American-origin (b = -1.70, SE = .75, p < .05), then Ecuadoran-origin (b = -1.41, SE = .67, p < .05) peers. Whereas in models two and three students in both the honors and gifted and talented track were shown to be at an advantage compared to regular-track students, the advantage disappeared for honors students after all of the controls were entered but it remained large and statistically significant for the gifted-and-talented-track students (b = 2.63, SE = .91, p < .01).

Separate regressions were run using children of Asian-born mothers as the reference category. Children of Mexican immigrant mothers was the only subgroup to exhibit a disadvantage relative to Asian-origin students after academic track and nativity were added to the regression model, but this disadvantage disappeared with all controls added. In addition, a hierarchical regression was run using gifted and talented as the reference category for academic track. The advantages associated with being in the gifted and talented track on NYCDOE search standard score remained in the final model compared to students in the regular (b = -2.63, SE = .91, p < .01), bilingual (b = -2.82, SE = .1.0, p < .01), ESL (b = -3.13, SE = .10, p < .01), and honors (b = -1.90, SE = .93, p < .05) tracks after controlling for mother country, student nativity, and covariates. Notably, the difference between gifted and talented and honors tracks, controlling for all other variables in the model, was not statistically significant when the transformed outcome variable was used.

Severe multicollinearity prevented meaningful interpretation of models that tested interactions between student nativity and race/ethnicity. Thus, a final series of regressions was run using only student's race/ethnicity, immigrant generation, academic track and the covariates. Results of these regressions are presented in Table 4. In the first model, in which race/ethnicity was entered as the only predictor, Hispanic students' disadvantage relative to Black students was shown to be large and statistically significant. No measurable gap was detected between Asian and Black students on the NYCDOE search standard score but Asian students had a higher raw mean score. Once immigrant generation was added to the model in the second step, the dummy variable for Hispanic stayed negative but was no longer statistically significant and both first- and second-generation immigrant students had statistically significantly lower scores than the thirdgeneration reference group even after controlling for race/ethnicity. In this block, the difference between foreign-born first-generation immigrant students and the third-generation plus Black reference group was larger and

**TABLE 4** Comparison of Regression Models Predicting NYCDOE Search Standard Score With Immigrant Generation and Race/Ethnicity

Independent	1	2	3	4
Constant	10.00 (.77)***	11.167 (.86)***	10.64 (.86)***	8.97 (.98)***
Race/Ethnicity Hispanic/Latino Asian/Pacific Islander	-2.03 (.79)** .519 (.90)	-1.27 (.83) 1.35 (.94)	99 (.81) .12 (.95)	-1.43 (.77) 845 (.92)
Immigrant Generation First Second	_	-2.18 (.74)** -1.96 (.71)**	-1.64 (.75)* -1.81 (.69)**	-1.25 (.71) -1.34 (.66)*
Track ESL Bilingual Special Education Honors Gifted & Talented	_ _ _ _	_ _ _ _ _	-1.04 (.57) 481 (.54) .073 (.87) 1.59 (.53)** 3.8 (.92)***	52 (.54) 07 (.51) .58 (.81) .71 (.53) 2.40 (.92)**
Controls Gender Seventh grade math First in family Home computer	_ _ _ _	_ _ _ _	_ _ _ _	1.65 (.32)*** .06 (.02)*** .131 (.39) 1.13 (.43)**
Mother Education Finished high school Some college Finished college I don't know	_ _ _ _	_ _ _ _	_ _ _ _	.75 (.48) .70 (.63) .14 (.54) 79 (.42)
$N \atop R^2 \atop \Delta R^2$	472 .074	466 .095 .021**	465 .165 .069***	379 .286 .122***

Note. The numbered columns represent separate regressions which included only those independent variables for which estimates are presented. Race/ethnicity, first generation, second generation, track, and mother education level were dummy coded, with the categories listed in the table compared to a specified reference category. The reference category for race/ethnicity was Black/African American, the reference category for immigrant generation was third generation plus, the reference category for track was regular, and the reference category for mother education was less than high school. Gender was scored 1 = female, 0 = male; first in family was scored 1 = yes, 0 = no; and home computer was scored 1 = yes, 0 = no. Seventh grade math was student's self-reported final average (0–100 scale) in math at the end of seventh grade. Unstandardized regression coefficients and standard errors (in parentheses) are provided.

more statistically significant than the difference between second-generation students and the reference group when controlling for the respondent's race/ethnicity. However, after academic track was added in the third step, the relationship was reversed and there was a larger gap in NYCDOE search standard scores between second-generation students and the reference group. Thus, much of first-generation students' disadvantage relative to the reference group and compared to their second-generation coethnic peers could be explained by their academic track. Because 46.8%

<sup>\*</sup>p < .05; \*\*p < .01; \*\*\*p < .001, two-tailed tests of significance.

of first-generation immigrant students were in bilingual track classes, this finding might also point to respondents' English proficiency as a factor influencing their approach to high school choice. Last, the regression coefficient associated with the Hispanic category remained negative in the second and third steps but was positive for the Asian category reflecting Hispanic students' low mean NYCDOE search standard score and Asian students' advantage on this measure compared to all other racial/ethnic groups.

The overall model regressing the NYCDOE search standard score on student's race/ethnicity, immigrant generation, academic track, mother education, first in family, home computer, and seventh grade math score explained 28.6% of the variance in the outcome, nearly the same as the model that included mother country as a predictor. In the final model presented in column four, the regression coefficient associated with being a first-generation student compared to third generation was no longer statistically significant. However, the second-generation disadvantage relative to third-generation plus students remained statistically significant (b = -1.34, SE = .66, p < .05). Like the earlier model, gender, seventh grade math scores, home computer, and the dummy variable for gifted and talented track were all statistically significantly associated with a respondent's NYCDOE search standard score. In addition, although neither racial/ethnic category nor any of the dummy variables for mother education was found to be significant at the standard alpha level of .05, the difference in NYCDOE search standard scores between Hispanic and Black students (b = -1.43, SE = .77, p = .064) and between respondents who did not know their mother's highest level of education attained (b = -.785, SE = .42, p = .061) and those who reported less than high school, when controlling for all other independent variables, reached significance at an alpha threshold of .10. Finally, in regressions performed separately for each mother country group gender proved to be the only statistically significant predictor of NYCDOE search standard score in the final model.

## DISCUSSION

Children of immigrant mothers from Mexico, the Dominican Republic, Ecuador, and other parts Latin America engaged in the process of choosing high schools in New York City in different and decidedly less rigorous ways than third-generation or higher students and those born to Asian immigrant mothers as measured by their degree of fidelity to a standard of search behavior delineated by the NYCDOE. On average, this group of students relied on fewer information sources, attended fewer open houses and fairs, was less likely to consider academic factors when choosing schools, and consulted with fewer people to help them make decisions. The disadvantage relative to children of U.S.-born mothers persisted for Mexican-, Ecuadoran-,

and other Latin American- and Caribbean-origin students (except those with mothers from the Dominican Republic) even after mother's education, academic track, and other factors were taken into account. The implications of this disadvantage in terms of final high school assignments could not be evaluated using this dataset. However, the regression results point to a potential source of stratification on the basis of family immigrant origin from the Spanish-speaking Caribbean and Latin America. Children of Mexican immigrant mothers in particular showed the lowest mean scores on all measures, including the composite NYCDOE search standard score. This pattern is consistent with other researchers' findings about Mexican-origin youth's generally poor outcomes across a range of educational indicators compared to non-Hispanic Whites and other Latino subgroups (Gibson et al., 2004; Portes & Rumbaut, 2001; Ream, 2005; Valencia, 2002).

Further exploration of the student background characteristics that contributed to variation in NYCDOE search standard scores revealed an overall second-generation disadvantage relative to third-generation or higher students after considering race/ethnicity, academic track, mother education, math score, gender, and having a home computer. Conversely, although the mean NYCDOE search standard score averaged across first-generation students from all countries was lower than that of third-generation or higher respondents, no significant difference was observed between the group means after controls were entered. Because second-generation Asian-origin respondents scored highest on most of the measures associated with recommended search behaviors, it can be inferred that second-generation students born to Latin American immigrant mothers may be in the most vulnerable position in terms of accessing high quality high schools. This was also evidenced by the larger negative coefficient associated with the "Hispanic" racial/ethnicity dummy variable and the greater and more significant gap between second- and third-generation plus students' scores in the final regression model. Notably, no statistically significant differences were found between first- and second-generation students from the same country of origin groups in Latin America. By contrast, first-generation Asian students scored lower than their second-generation counterparts on multiple measures, many of whom were in the gifted and talented track.

The results indicate that second-generation students did not engage in the choice process like their first-generation peers and in ways that ultimately made them worse off than the third-generation students in the sample, at least in terms of following the NYCDOE recommendations. The dataset was limited in its power to explain the generational trends observed; however, a variety of possible factors for this second-generation disadvantage are worth considering. First, although many recent immigrant students have limited English proficiency and may be unfamiliar with educational policies, practices, and expectations in their new school settings, in the case of applying to high school in New York City, these same characteristics may work to

their benefit. Whereas school personnel may assume that English-speaking, U.S.-born students understand the minimal instructions provided, will be aware of high school options in New York City, and will know how to proceed with the application independently, the same expectations might not exist for first-generation students who are still learning English. As a result, the degree of assistance that students in each of these groups receive from school personnel may differ.

Students' own behaviors and assumptions rather than those of school personnel might also explain the variation observed. In other words, second-generation children of Latin American immigrant parents might be less likely to seek out guidance or advice from school personnel (or family members and others) because they think they understand the basic instructions provided in English and feel comfortable making decisions and completing the application independently, even if they are not fully equipped to do so. By contrast, recent immigrant students might make clear their need for support and rely more on teachers and family members to help them navigate the process or to even make school choices for them. In fact, the qualitative data gathered through the school ethnography and student interviews provide some evidence of the validity of both hypotheses: individual-and school-level factors ultimately contributed to generational differences in students' approach to choosing high schools in New York City.

Earlier research in the field of immigration studies has pointed to a "second generation decline" (Gans, 1992; Perlmann & Waldinger, 1997) when comparing first- and second-generation students' social, economic, and academic outcomes in the United States. Scholars theorized that these U.S.-born students' exclusion and subordination in the education system (Matute-Bianchi, 1991), assimilationist pressures (Gans, 1992), and exposure to their parents' lack of mobility (Suárez-Orozco & Suárez-Orozco, 1995) may have accounted for the decline. Although the students in this sample did not exhibit identical patterns given the lack of significant difference detected between first- and second-generation students' NYCDOE search standard scores, the extant hypotheses for an overall secondgeneration disadvantage may hold when making comparisons with African American/third-generation or higher students. That is, if being born to an immigrant mother from Latin America constituted a limitation to students' successful engagement in school choice regardless of their own nativity, the additional challenges shown to be associated with being a U.S.-born child of immigrants may be relevant to comparisons between second- and third-generation or higher students. In fact, Suárez-Orozco and Suárez-Orozco (1995) found this to be the case: they compared the achievement motivation of first- and second-generation Mexican-origin students and a third-generation plus sample of middle-class White students, and they found second-generation youth to have the lowest motivation levels. It is important to note, however, that differences between immigrant-origin students and African American reference groups on similar outcomes have not been as widely documented as those detected between immigrant-origin Latino/a and third-generation plus White students.

This study's focus on students' school choice behaviors represents a departure from much of the research on adolescents in schools. By examining students' engagement in school choice rather than a traditional academic outcome such as test scores, the project sheds light on an aspect of the schooling process whose results (high school match) may be more strongly associated with parental nativity and language, knowledge of policies, and familiarity with the education system than what has been established in the literature based on traditional achievement measures. As a result, although previous studies have shown that typical sources of stratification in education (family income and parental education) are also relevant predictors of school preferences and behaviors (Schneider et al., 2000; Teske et al., 2007; Teske et al., 2000), these finding suggest that family immigrant origins (particularly from Latin America) should also considered as a potentially powerful factor contributing to difference and disadvantage in accessing high quality educational options through school choice policies. Thus, the gap between low-income second-generation children of Latin American immigrants and third-generation or beyond/African American students found in this small-scale study of students' experiences with high school choice may point to an important new line of empirical inquiry.

The findings regarding the salience of academic track, or, more specifically, the gifted and talented students' uniqueness, were in many ways expected given the observed differences in student background characteristics by track. On the other hand, the fact that all benefits of being an honors track student disappeared in the final regression model was noteworthy. Any advantages associated with being in the honors track compared to the regular track were accounted for by mother country, student nativity, gender, math score, mother's education, and home computer. Therefore, these data demonstrate that being a high performing student in an advanced academic track with similarly high performing classmates was insufficient to counteract the disadvantages associated with being born to an immigrant mother from Mexico, Ecuador, and other parts of Latin America.

Finally, the results raise additional questions about the validity of the NYCDOE's claim of high school choice as a policy that promotes educational equity. If a student's propensity or capacity to research, evaluate, and select appropriate high schools in ways that the district believes will increase the likelihood of their receiving a satisfactory high school assignment differs as a function of his/her or his/her parents' nativity, socioeconomic background or academic ability, there are fundamental flaws in both the logic and implementation of the policy. Unlike Patrick Wolf and his colleagues' findings that participation in school choice programs in Washington, DC and Milwaukee increased low-income parents' overall school engagement

(Stewart, Lucas-McLean, Jenseon, Fetzko, Ho, & Segovia, 2010; Stewart, Wolf, Corman, McKenzie-Thompson, & Butcher, 2009), this study provided no evidence that the choice policy served as an engine for greater parental or student attentiveness to schooling. For choice to serve as a real equity measure, students who do not have the resources, knowledge, and built-in family supports to effectively navigate the system must receive enhanced guidance from other sources. To level the field, the district should require and incentivize schools to provide structured, personalized support and guidance to students and families about how to investigate and select appropriate high schools. Schools serving higher needs populations should receive additional resources to meet the demand.

The high school choice process in New York City represents considerably more than just a means for students and families to select high schools. In theory, eliminating residentially determined school assignments could interrupt patterns of racial/ethnic and income-based school segregation and unblock low-income students' historically limited access to high quality educational opportunities. Students and families can also be exposed to a number of valuable lessons about social mores, mainstream values, and behavioral expectations in the context of applying to high school. In an ideal situation, high school choice also provides students an occasion to develop important, transferrable skills. They can learn how to access information about public services like schools, evaluate a range of options, generate a system of prioritization or schema for ordering preferences, and develop strategies to improve their chances of earning a competitive placement—in a school, university or workplace. Yet, schools must work in partnership with students and families for this to occur.

#### CONCLUSIONS

The strong association between high school completion and life-course outcomes underscores the importance of students' high school choices and placements. Differences in unemployment rates, incarceration rates, and household income between people who have not completed high school and those who have earned a high school diploma or more (U.S. Bureau of Labor Statistics, 2010) represent only some of the consequences of failing to finish high school. In many ways, the process of searching for and applying to high school in New York City parallels the college choice process. As such, it represents an opportunity for middle school students to begin to understand and hone the skills necessary to effectively identify appropriate schools, evaluate options, and make important educational decisions. In fact, new data demonstrating the strong association between high school selectivity in New York City and high school graduation rates (Campaign for Fiscal Equity, 2010) mirrors longstanding research in post-secondary education

about the powerful link between institutional selectivity and the likelihood of earning a post-secondary degree (Kane, 1998; Kelly et al., 2010; Light & Strayer, 2000). Thus, identifying gaps in students' and families' knowledge and support structures to make sound choices at the secondary level could be an important step toward addressing the persistent inequalities in access to high quality educational opportunities at all levels, and, ultimately, in educational attainment.

#### **NOTES**

- 1. First generation refers to immigrant children born outside of the United States; second generation refers to U.S.-born children of at least one foreign-born parent; third generation refers to U.S.-born children of native-born parents.
- 2. Starting with the entering 9th grade in the fall of 2008, all students were required to pass five Regents exams with a score of 65 or better in order to graduate; local diplomas will no longer be awarded.
- 3. The Progress Report is a school-level report that includes data on student performance on standardized exams, graduation rates, academic progress (credit accumulation and proficiency gains), school environment, and other characteristics. Each school is given a letter grade (A–F) based on a various metrics and may receive financial awards or sanctions based on the grade.
- 4. The NYCDOE search standard variable ( $\max = 22$ ) was positively skewed according to conventional criteria (Tabachnick & Fidell, 1989). Both log and square root transformations were done, and the square root transformation was most successful in reducing the skew (93.5% reduction in skewness). Regressions were run using both the square root transformed variable and the untransformed variable. The results presented in this section are based on the untransformed outcome variable. Any differences in the size and direction of the regression coefficients or in the significance of relationships found between the results from models using the transformed and untransformed outcome variable are noted.

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