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Latino Students & the educational pipeline

a three-part series

Part I:

From Middle School to the Workforce: Latino Students in the Educational Pipeline

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PART I

From Middle School to the Workforce: Latino Students in the Educational Pipeline

This component of our series focuses on the NELS 8th-grade cohort and their progression through high school, postsecondary education, to the workforce. This section provides the most comprehensive look at what happens to students from the 8th grade in 1988 by the year 2000.

About the Authors

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Preface



Dr. Watson Scott Swail
President
Educational Policy Institute

Researchers, policymakers, and educators as a whole often wonder what becomes of students as they progress through the educational system. As a former teacher, I think back to students I taught whose names are now lost, but whose faces and personalities remain very much intact. I often wonder what happened to them since we last met. Did they finish high school? Go on to college? Get married and have children? Did they meet their personal goals? Ultimately, I want to know if things worked out for them. The memories of these students still mean a lot to me. They helped shape me into the individual I am today, and they—well, most of them—made my life much, much better just through the opportunity to get to know and work with them. Unfortunately, as with most teachers, I am left mostly with memories.

I mention this because knowing what becomes of students is a very critical part of the development of public policy and sound educational practice. But like teachers, only rarely do we ever get a glimpse into the lives of past students.

This report is one of a series of three reports on Latino students in the educational pipeline, all of which are available for free download on the web at www.educationalpolicy.org. The purpose of this series is to provide a sense of the challenges facing Latino youth compared to White youth on the pathways to postsecondary education and the baccalaureate. The series relies on data from the National Educational Longitudinal Study (NELS), sponsored by the National Center for Education Statistics in 1988 to follow 8th grade students from middle school through to the workforce. In total, over 26,000 8th-grade students were surveyed in 1988, with followup surveys in 1990 (10th grade), 1992 (12th grade), 1994 (2 years after scheduled high school graduation), and finally in 2000 (8 years after scheduled high school graduation). NELS gives us the best glimpse of students in and beyond the educational pipeline in America.

While we cannot answer questions about what happened to James, Sarah, or Juan, we can show trends based on students as a whole and certain subsets. We can see if these students graduated from high school, if and where they went to postsecondary studies, and what's happened to them since. Because NELS is a nationally-representative and randomly-assigned database, we have a fairly accurate portrayal of students in America. The one unfortunate truth is that we can't look at the state or local level. The sampling design doesn't allow that type of specificity.

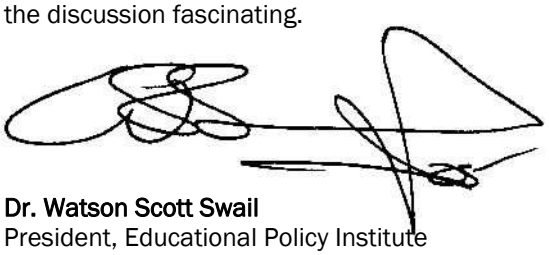
Still, this is a magnificent research tool that provides us with a glance into our future through a look at the past experiences of the NELS cohort. We can wrestle with what these data mean and try to assess what educational and social policies can make a difference. While it is true that NELS is somewhat

dated (the 1988 8th grade class?), one must remember that it is the power of time that makes this database so unique: 12 years following one cohort of students.

Many researchers have analyzed the information from NELS since the first database was released in 1991. Some were commissioned directly by the US Department of Education. Others, like us, received grants to study certain aspects of NELS, and still others include university-based researchers and graduate students who were simply interested in what NELS had to say. Our purpose in this study, supported by a generous grant from Lumina Foundation for Education, is to focus in on the Latino population as they completed middle school, made their way through high school, and looked toward post-secondary education and the workforce. Throughout the report, we compare Latino students with White students. We omitted other race/ethnic groups not because they are less important, but because discussion of more than the two groups of specific interest tends to get overly complex.

I would also like to thank Alberto Cabrera, a senior scholar for EPI and a professor at the University of Wisconsin, for his leadership during this series. As well, Chul Lee provided exceptional data support and Adriane Williams helped us with the final reporting of these findings. I also must acknowledge Tina Gridiron Smith of Lumina Foundation for Education, who understood the importance of this effort and provided unwavering support.

After working with these data for the past 10 years, I feel like the NELS students are mine. While I can't find out what happened to my middle school students back in Winnipeg, Manitoba, and Hampton, Virginia, I have a pretty good idea what happened to the NELS students of 1988. I think you'll find the discussion fascinating.



Dr. Watson Scott Swail
President, Educational Policy Institute

April 4, 2005

Executive Summary

In researching Part I, our interest was in finding out what happened to NELS 8th-grade Latino students from 1988 12-years later. Through descriptive and inferential statistics, this section describes how Latino students compared with White students throughout the various stages of the educational and occupational pipeline. The section covers background characteristics, preparation for postsecondary education, access to postsecondary education, postsecondary persistence and completion, and employment outcomes. This executive summary skims this information. We encourage readers to take a thorough look at the content of the full report.

Background Characteristics

Educational Legacy. Latino students were much less likely to have a parent with an earned educational credential—at any level—than White students. Conversely, 35 percent of White students had parents with at least a BA, while only 14 percent of Latinos had the same educational legacy.

Family Income. Latino 8th-grade students were much more likely to hail from low-income backgrounds than White students. Over half (53.7 percent) of Latino students came from families with income below $25,000 (1988 dollars) compared to less than one quarter (23 percent) of White students.

Urbanicity. In 1988, 44.5 percent of Latino students lived in an urban area, compared to 17.3 percent of White students, and a similar percent of students from either group lived in a suburban area (47.3 White and 40.3 Latino).

Postsecondary Aspirations. White students were much more likely than Latino students to aspire to a postsecondary degree while in the 8th grade, especially a BA or higher. In total, 78.3 percent of White students expected to earn at least a BA, of which 23 percent planned on an advanced degree. By comparison, 55.2 percent of Latino students planned on earning at least a BA, with 19.8 percent looking forward to an advanced credential.

Marital Status and Children. By 2000, almost half of Latino and White students were still single (48 percent). However, Latino students were more likely to have had children than White students. Fifty-five percent of Latino students had at least one child compared to 35 percent of White students.

Risk Factors. One variable in the NELS database identifies risk factors that impact the ability of students to prepare, enroll, and complete at the postsecondary level. White students were more likely to have none or one risk factor, but Latino students were more likely to have two or more risk factors.

In fact, 49 percent of Latino students had at least three risk factors, compared to 25 percent of White students.

Preparation For Postsecondary Education

This section analyzes the NELS:88/00 database for evidence of the preparedness of students with regard to academics in high school. Indicators include two tests administered to the 8th-grade cohort in 1988 (reading and mathematics), high school course-taking patterns, remedial course work, and college test-taking propensity and scores.

Reading & Mathematics Achievement. Latino students were more likely to have a higher percentage of students in the lower quartiles of achievement on the NELS reading and mathematics tests and less in the higher quartiles than White students. Less than 20 percent of White students scored in the lowest quartile of achievement, compared to one-third of Latino students. At the upper end of the distribution, almost one third of White students scored in the top quartile, compared to about 12 percent of Latino students.

Remedial Course-Taking Patterns During High School. Latino students were more likely than White students to take mathematics, English, and reading remedial/developmental courses in during high school. Latino students were also more likely to be multiple-remedial course takers.

College Qualification Index. Latino students were more concentrated in the "not qualified" category, while White students are more concentrated in the "Qualified" category. The differences occur in these two ends of the distribution, where a gap of about 19 percent divides Latino and White students at either category.

High School Curriculum Intensity. White students are more likely to take rigorous coursework in high school than Latino students. Forty-three percent of White students took courses in the top two quintiles of curriculum intensity, compared to 30 percent of Latino students. Conversely, 43 percent of Latino students took courses in the lower two quintiles of academic intensity compared to 39 percent of White students.

In mathematics, the highest level of mathematics achievement for one quarter of Latino students was Algebra I, an entry-level mathematics course. Eighteen percent of White students did the same. In total, 80 percent of Latino students are stopped at the Algebra II level, as did 68 percent of White students—a 12 percent gap. Stated another way, 32 percent of White students take some level of advanced mathematics compared to only 20 percent of Latino students.

Advanced Placement. Three percent of White students took AP English test compared to 0.4 percent of Latino students. Thus, White students were about eight times as likely to take the AP English test. AP US History and AP Mathematics posted similar results, with 2 percent of White students taking the test compared to 0.8 percent of Latinos, providing a ratio of 2.6:1. AP Foreign Language was the only test where Latinos approached the test-taking percentages of White students. With respect to AP test scores, 51 percent of Latino students scored a 3 or higher, potentially giving them a course credit during college. This compares with 65 percent of White students. However, 49 percent of all Latino AP test takers scored a 2 or lower, which doesn't qualify for academic credit. Only one-third of White students did the same.

College Placement Testing. A major hurdle toward college attendance, at least at selective institutions, is the participation in a college placement examination, such as the SAT or ACT. Fifty-nine percent of White students took the SAT or ACT compared to 44 percent of Latino students—a gap of 15 percent. Not only did White students take the test at much higher rates, but they also scored higher than Latino students. White students scored 157 points higher than Latino students on a 1600 scale (946 vs. 789).

Access To Postsecondary Education

In this section we look at various indicators of postsecondary access, starting with high school completion, which is the obvious first major step to a postsecondary experience. But our discussion will then look at matriculation rates to postsecondary institutions by institution type, cost, and selectivity.

High School Completion. Ninety-three percent of White students graduated with a high school diploma as did 86.4 percent of Latino students. Almost 10 percent of Latino youth received a GED, 3 percent higher than White students (6.8 percent).

Postsecondary Enrolment. By the year 2000, 8 years after scheduled high school graduation, two-thirds of Latino students attended some type of postsecondary institution for some duration of time, compared to 74.5 percent of White students. This 10 point difference further amplifies the opportunity that White students have compared to Latino students. Additionally, White students were much more likely to attend a four-year public institution than a Latino student (17 percent vs. 8 percent) with a similar pattern at a four-year private institution (24 percent vs. 14 percent).

Tuition Charges. The average tuition charge for Latino students is far lower than that for White students. On average, Latino students paid $3,978 for

tuition while White students paid $5,981 per year, a 50-percent increase. This mostly reflects the fact that Latino students are more likely to attend two-year institutions compared to White students, but one might also consider that White students are more likely to attend higher-selective, higher-priced institutions.

Postsecondary Persistence and Completion

Degree Attainment. The major story here is not who attained, but who didn't. Almost two-thirds of Latino students who enrolled in postsecondary education did not earn a degree by the year 2000. Comparatively, 40 percent of White students did not complete. At the certificate and Associate's levels, the completion rates are similar between Latinos and Whites, 4 and 8 percent respectively. Half of all White postsecondary students ended up with at least a Bachelor's degree. Only 24 percent of Latino students did the same. One third (33 percent) of all White students received a BA, compared to 17 percent of Latino students, and 15 percent of all White students went on and received a graduate degree, compared to 7 percent of Latino students.

Attendance Patterns. Over half of Latino students (53.3 percent) attended college in a part-time status. This is skewed by the fact that 62.1 percent of Latino students attended part-time at the two-year level. Comparatively, 37.3 percent of all postsecondary White students attended part-time. At the four-year level, slightly more than one third (37.4 percent) of Latino students attended part-time compared to 26.4 percent of White students. Two-thirds (67.9 percent) of White postsecondary students remain in continuous enrollment until degree completion compared to 44.3 percent of Latino students

Delay of Entry to PSE. Latino students were more likely to delay entry into postsecondary education following successful graduation from high school. A gap of 5.5 points between Latinos (77.6 percent) and White students (83.1 percent) exists with regard to entering postsecondary education within 7 months of high school graduation.

Time to Degree. Forty-four percent of White students graduate within the four-year timeline of a traditional Bachelor's degree, but less than one quarter (23 percent) of Latino students are able to do the same.

Credits Earned. At the two-year level, credits earned by Latino and White students are relatively equal. Most students who enrolled in a two-year institution earned less than 10 credits. At the four-year level, 80.6 percent of White students earned 60 credits or more compared to 64.8 percent of Latinos.

Employment Outcomes

The gift of the final followup of the NELS database is the ability to look at occupational trends of the 1988 8th grade class. It should be noted that, because of sample size, the differences between groups are largely insignificant, statistically speaking. However, these data give us a look at where students went following their educational experience.

Occupational Choices. The largest occupational sector for NELS students is the service industry, where 35 percent of Latinos earn a living compared to 30 percent of White students. Second is business, of which 28 percent of Latinos and 25 percent of White students work, and third is the mechanical/laborer sector. This is where approximately 16 percent of our 1988 8th grade Whites and Latino students are earning a living.

Current Employment Status. Approximately three quarters of our 1988 cohort are working full-time. Seventy-nine percent of White students are now working and 74 percent of Latinos. Sixteen percent of Whites work part-time, as do 17 percent of Latinos.

Income. Eight years after scheduled high school graduation, Latino students earn, on average, $20,074 per year. White students, on the other hand, earn $24,225 per year, a difference of 21 percent.

Introduction

The research literature is full of papers discussing the plight of Latino students. Most focus on the barriers that these students face as compared to others, most notably White students, but also Asian, Black, and Native Americans. Some studies focus on particular school districts or college campuses. Others use broader databases, while still others, unfortunately, use little data and even littler analysis.

Lumina Foundation for Education was generous enough to provide the Educational Policy Institute with a grant to study Latino students in the educational pipeline using the most powerful longitudinal database available: the National Educational Longitudinal Study (NELS). Started in 1988, the NELS study randomly sampled 26,000 8th-grade students, and followed them up four times over the course of the next 12 years. The final followup, in 2000, provides us with a unique glimpse into the lives of this student cohort eight years after scheduled graduation. This long-range view allows us to see what happened to them in high school, postsecondary education, and into the job market.

This report series is divided into three sections to answer three questions regarding Latino progress through the educational pipeline:

Question One. What happened to NELS 8th-grade Latino students in the 12 years that followed? How did their progress compare with White students throughout the various stages of the educational and occupational pipeline? (Part I)

Question Two. What are the primary differences between Latino and White students for those who completed a BA and other levels of education? (Part II)

Question Three. What factors seem to have the most impact on Latino students' ability to navigate the educational system and research higher levels of learning? (Part III)

Part I of the series focuses on the first question. We use the NELS database to paint a portrait of what happened to the entire cohort of 8th grade students over time. The section provides a brief summary of findings related to the progression of students from 8th grade through to the workforce, specifically looking at their academic preparation, matriculation to postsecondary education, persistence through postsecondary education, and where they ended up in the workforce.

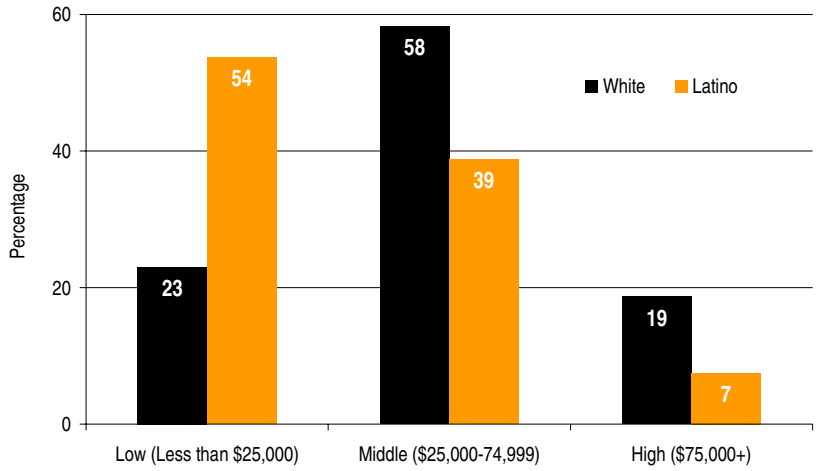
BACKGROUND CHARACTERISTICS

Although background characteristics do not inform us specifically on what we can do in policy circles to change the dynamics of the educational pipeline for students, they do provide a perspective that underscores the pronounced factors that impede progress for Latino youth as compared to White youth. The summaries provided here are depicted in Table I-1 on Page 9.

Educational Legacy. Latino students were much less likely to have a parent with an earned educational credential—at any level—than White students. In fact, a full one-third (33.1 percent) of Latino students had parents whose highest level of education was less than a high school diploma, compared to only 1-in-17 for White students (5.8 percent). At the other end of the educational spectrum, 35 percent of White students had parents with at least a BA, while only 14 percent of Latinos had the same educational legacy.

Family Income. Latino 8th-grade students were much more likely to hail from low-income backgrounds than White students. Over half (53.7 percent) of Latino students came from families with income below $25,000 (1988 dollars) and only 7.3 percent were from high income families (above $75,000). Comparatively, less than one quarter (23 percent) of White students were low-income and 18.7 percent were from high income families (Exhibit I-1).

Exhibit I-1. Family Income of 1988 8th-Grade Latino and White Students



NOTE: Income was measure in 1988 while students were in the 8th grade.

Gender. The pool of 8th-grade Latino students was slightly more female than the White cohort. Fifty-three percent of Latino students were female compared to 50 percent of White students.

Urbanicity. The urbanicity of students was measured twice—in 1988 when students were in the 8th grade and in 1992 when they were scheduled to be in the 12th grade. In 1988, 44.5 percent of Latino students lived in an urban area, compared to 17.3 percent of White students. A similar percent of students from either group lived in a suburban area (47.3 White and 40.3 Latino), while 35.5 percent of White students lived in a rural area compared to 15.3 percent of Latino students. It is likely that some of these rural White students are those who live in areas that, while not considered suburban, are bedroom communities of larger metropolitan areas. Four years later, in 1992, a higher percentage of Latino students were living in urban areas (49 percent vs. 44.5 percent in 1988). As well, the percent of White students living in urban areas increased by 3 percent to 20.2 percent.

Postsecondary Aspirations. White students were much more likely than Latino students to aspire to a postsecondary degree while in the 8th grade, especially a BA or higher. In total, 78.3 percent of White students expected to earn at least a BA, of which 23 percent planned on an advanced degree. By comparison, 55.2 percent of Latino students planned on earning at least a BA, with 19.8 percent looking forward to an advanced credential (Exhibit I-2, Page 8).

Marital Status in 2000. By 2000, 8 years after scheduled high school graduation, there were no significant differences between Latino and White students in terms of marital status. Almost half of students were still single (48 percent of either group) and approximately 43 percent were married.

Dependent Children in 2000. By 2000, Latino students were more likely to have had children than White students. Fifty-five percent of Latino students had at least one child compared to 35 percent of White students. Thirty percent of Latino students had had at least two children by that time, significantly higher than the 17 percent of White students who did the same.

Risk Factors. A variable was developed by MPR Associates related to risk factors that impact the ability of students to prepare, enroll, and complete at the postsecondary level. The 10 items are listed in Table I-1. Exhibit I-3 illustrates the number of risk factors of Latino and White students. As can be seen, White students were more likely to have none or one risk factor, but Latino students were more likely to have two or more risk factors. In fact, 49 percent of Latino students had at least three risk factors, compared to 25 percent of White students. Nineteen percent of White students had no risk factors, but only 5 percent of Latino students were risk-free.

While all but one illustrate statistically-significant differences between Latinos and White students, three are particularly of interest and worthy of discussion. First, 29.5 percent[1] of Latino 8th grade students have parents who do not possess a high school diploma, compared to only 6.1 percent for White students. Second, Latino youth were much more likely to come from very poor families (less than $15,000). Thirty-five percent of Latinos fit this category, compared to 12.4 percent of White students. And finally, Latino students were more likely to have children during high school than White students (11 percent vs. 4 percent).

Exhibit I-2. Postsecondary Aspirations of 1988 8th-Grade Latino and White Students

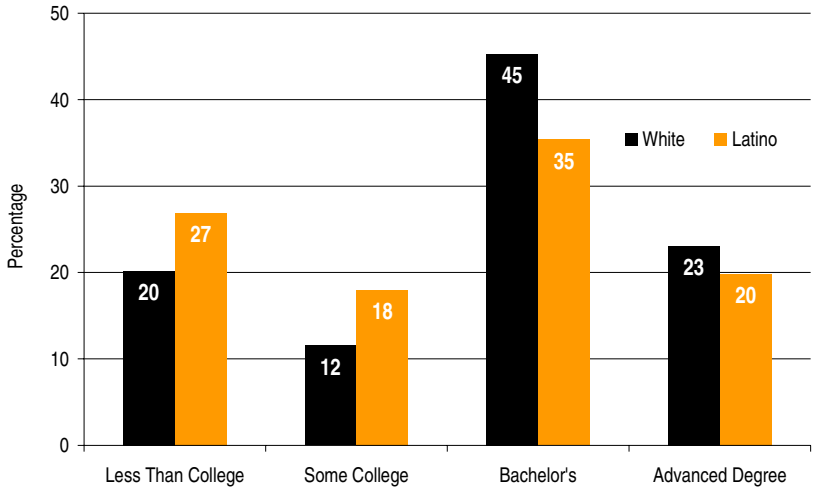
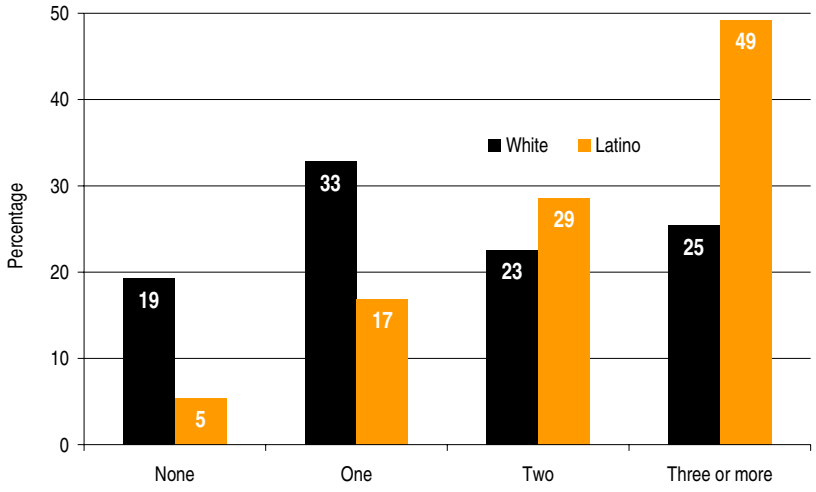


Exhibit I-3. Number of Risk Factors for 1988 8th-Grade Latino and White Students



[1] Note that this figure does not match the figure posted under educational legacy in Table I-1. This is because the pool used for the risk calculation is different than that used for the educational legacy calculation. The later uses only data from participations who answered that query.

Table I-1. Background Characteristics of the 1988 8th-Grade Cohort (NELS:88/00)

	All	White	Latino	*t*	p > t	
Gender						
Male	49.9	49.7	46.6	0.89	0.38	
	50.1	50.3	53.4	-0.89	0.38	
Highest Parent Education						
No HS diploma	9.4	5.8	33.1	-10.28	0.00	***
HS diploma or GED	19.0	19.4	17.4	1.06	0.29	
Some college	41.3	41.1	35.3	2.42	0.02	**
Bachelor's degree	16.0	17.7	7.8	6.91	0.00	***
Graduate studies	14.2	16.0	6.3	7.16	0.00	***
Family Income						
Low (Less than $25,000)	29.3	23.0	53.7	-10.65	0.00	***
Middle ($25,000-74,999)	54.0	58.3	38.8	7.19	0.00	***
High ($75,000+)	16.8	18.7	7.5	8.60	0.00	***
Urbanicity of 8th-grade school						
Urban	25.8	17.2	44.5	-5.77	0.00	***
Suburban	44.0	47.2	40.3	1.45	0.15	
Rural	30.2	35.5	15.3	5.07	0.00	***
Urbanicity of 12th-grade school						
Urban	29.0	20.2	49.1	-6.31	0.00	***
Suburban	40.0	43.5	34.6	1.95	0.05	*
Rural	30.9	36.2	16.4	5.18	0.00	***
Highest degree planned in the 8th grade						
Less Than College	20.2	20.2	26.9	-2.59	0.01	**
Some College	13.2	11.6	18.0	-2.25	0.03	**
Bachelor's	43.5	45.3	35.4	3.47	0.00	***
Advanced Degree	23.1	23.0	19.8	1.58	0.12	
Marital Status in 2000						
Single, Never Married	52.9	48.3	48.1	0.08	0.94	
Married	39.3	43.4	42.9	0.15	0.88	
Divorced	4.8	5.4	5.5	-0.12	0.91	
Separated	2.2	2.2	1.3	1.46	0.15	
Widowed	0.0	0.0	0.0	0.08	0.94	
In Marriage-Like Relationship	0.8	0.7	2.3	-2.37	0.02	**
Dependents in 2000						
No Child	59.6	64.5	45.5	5.31	0.00	***
One	20.2	18.2	24.5	-1.95	0.05	*
Two	13.1	11.9	18.6	-2.52	0.01	**
Three or More	7.1	5.5	11.5	-1.98	0.05	**

**P<0.1, **P<0.05, ***P<0.01*

Table I-1. Background Characteristics of the 1988 8th-Grade Cohort (NELS:88/00) (Continued)

	All	White	Latino	*t*	p > t	
Risk Factors						
Raised by Single Parent	17.9	13.9	16.9	-1.46	0.14	
Parents With No High School Degree	9.3	6.1	29.5	-8.31	0.00	***
Having Siblings who Dropout From High School	53.2	51.5	63.3	-4.27	0.00	***
Being Home Alone for More Than Three Hours	15.1	12.7	13.2	-0.32	0.75	
Limited English Proficiency	2.3	0.9	10.2	-3.10	0.00	***
Family Income Less Than $15,000	18.3	12.4	34.5	-6.76	0.00	***
Held Back in School	16.3	14.5	19.9	-2.01	0.05	**
Changed High School More Than Twice	31.2	29.0	36.5	-1.98	0.05	**
Having a GPA of C or Less	35.7	33.6	39.9	-2.06	0.04	**
Having Children During High School Years	5.4	4.0	11.0	-2.38	0.02	**
Number of At-Risk Factors						
None	15.7	19.3	5.4	11.29	0.00	***
One	29.7	32.8	16.8	8.20	0.00	***
Two	23.0	22.6	28.5	-1.80	0.07	*
Three or more	31.6	25.4	49.2	-6.85	0.00	***

**P<0.1, **P<0.05, ***P<0.01*

PREPARATION FOR POSTSECONDARY EDUCATION

How students prepare for postsecondary education is a critical area for concern among educators and policy makers, and no less important to the students themselves. Academic preparation impacts the attention one spends to the prospect of postsecondary education and has a direct impact on the type of school a student applies and is ultimately admitted.

This section analyzes the NELS:88/00 database for evidence of the preparedness of students with regard to academics in high school. Indicators include two tests administered to the 8th-grade cohort in 1988 (reading and mathematics), high school course-taking patterns, remedial course work, and college test-taking propensity and scores.

Reading & Mathematics Achievement. In 1988, 8th-grade students in the NELS study were administered both a reading and mathematics achievement inventory to determine relative academic standing. In both occurrences, Latino students were more likely to have a higher percentage of students in the lower quartiles of achievement and less in the higher quartiles than White students. As can be seen in Exhibit I-4, the percentage of students placed in the four quartiles of achievement are remarkable similar across the two tests. Less than 20 percent of White students scored in the lowest quartile of achievement, compared to one-third of Latino students. At the upper end of the distribution, almost one third of White students scored in the top quartile, compared to about 12 percent of Latino students.

Exhibit I-4. Eighth-Grade Reading Achievement Test Scores of 1988 8th-Grade NELS Latino and White Students, by Quartile (1988)

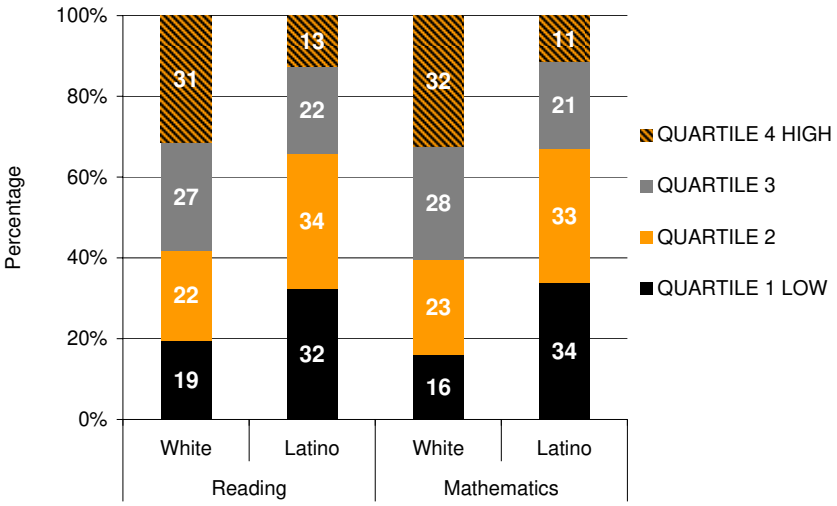
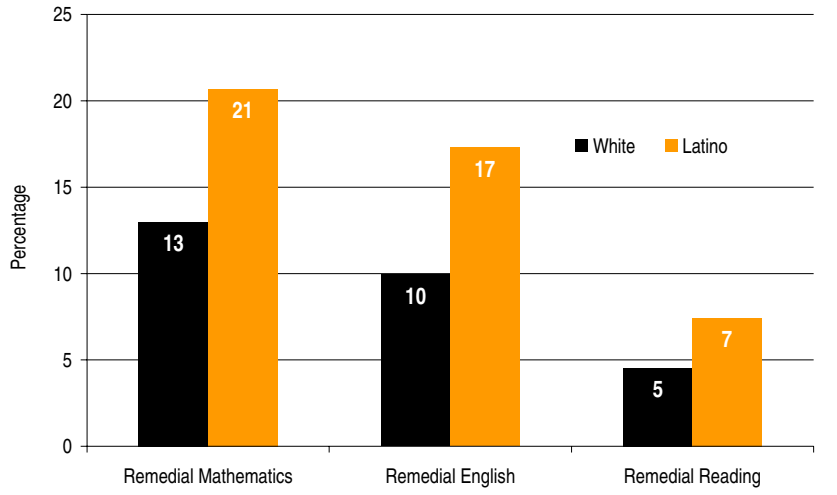


Exhibit I-5. Percent of 1988 8th-Grade NELS Latino and White Students Who Completed Remedial Coursework in High School, by Discipline



Remedial Course-Taking Patterns During High School. Latino students were more likely than White students to take mathematics, English, and reading remedial/developmental courses in during high school. Exhibit I-5 (Page 7) illustrates the differences in remediation for Latino and White high school students. In each case, a significant number of Latino students enroll and complete remedial mathematics and English courses (approximately 7 percentage points), while the difference in reading course-taking is statistically insignificant.

Latino students were also more likely to be multiple-remedial course takers. In remedial mathematics, 13.3 percent of Latino students took two or more remedial courses compared to 6.5 percent of White students. In English, 11.2 percent of Latino students took two or more remedial courses, compared with 7.1 percent of White students.

College Qualification Index. Using a college qualification index developed by MPR Associates for the U.S. Department of Education, we can get a better idea of how prepared students are for postsecondary studies. The index was designed to approximate college admissions criteria, and includes cumulative academic course GPA, senior class rank, the 1992 NELS aptitude test scores, and the SAT and ACT scores. The index was adjusted to account for having taken rigorous high school academic work.

As illustrated in Exhibit I-6, Latino students were more concentrated in the "not qualified" category, while White students are more concentrated in the "Qualified" category. Approximately 1 of 7 students, Latino or White, are considered "minimally qualified" for postsecondary education. The differences occur in the two ends of the distribution, where a gap of about 19 percent divides Latino and White students at either category.

Exhibit I-6. Percentage of 1988 8th-Grade NELS Latino and White Youth Qualified for College

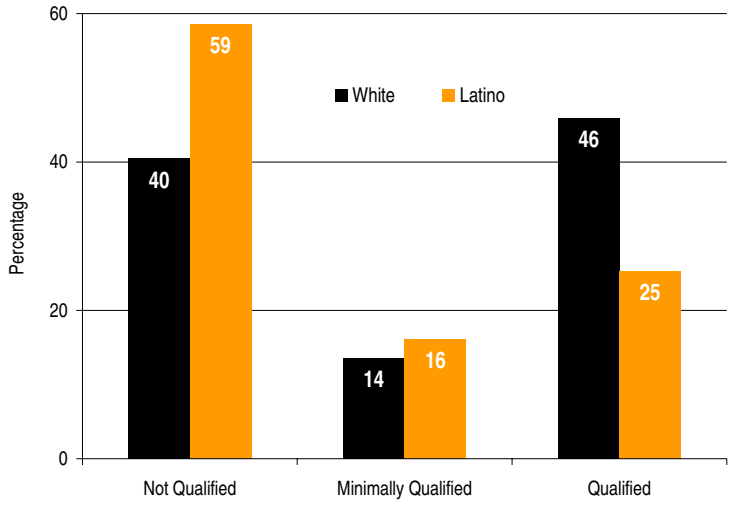
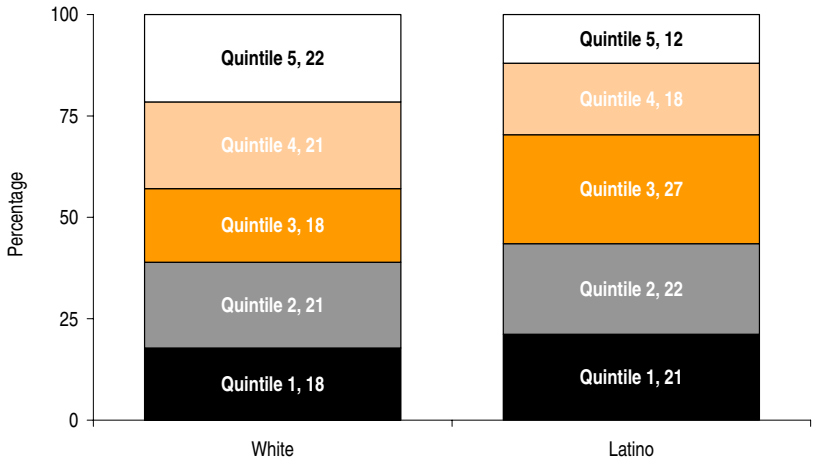


Exhibit I-7. Academic Curriclum Intensity for 1988 8th-Grade NELS Latino and White Students During High School



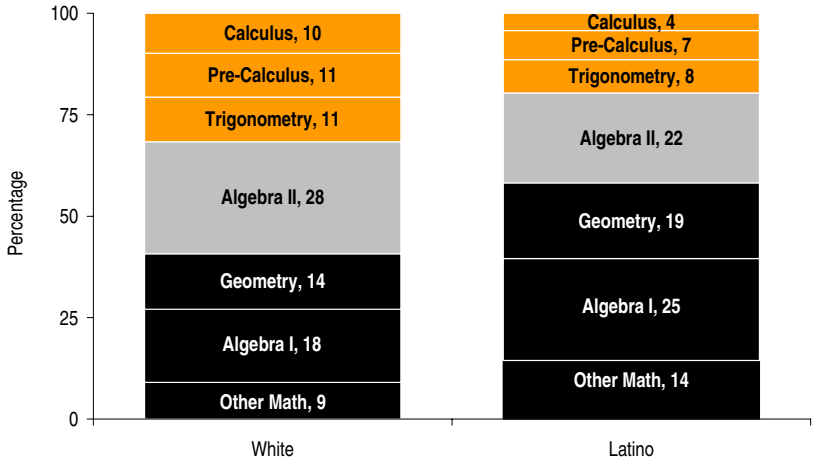
High School Curriculum Intensity. There are several measures of the level of high school curriculum that students experienced. The first is a curriculum intensity index that measures the academic rigor of coursework taken. Split into quintiles based on intensity, White students are slightly skewed toward the higher end of the intensity distribution, with approximately 21 percent of students in each of the top two quintiles, totaling 43 percent. Comparatively, 30 percent of Latino students engaged in curricula that ranked in the top

two quintiles. Of course, given this information one could understand that the other end of the distribution skews in favor of Latino students. In total, 43 percent of Latino students take courses in the lower two quintiles of academic intensity. Thirty-nine percent of White students do the same. Exhibit I-7 clearly shows us the large percentage of Latino students caught in the middle quintile—27 percent, compared to 18 percent of White students.

A second variable is the highest mathematics course completed in high school. There are three basic categories where mathematics courses fall: basic, intermediate, and advanced. Intermediate courses are required to get students into college, but advanced courses give students better choices of institutions.

Algebra I is a proxy for basic mathematics achievement. Unfortunately, one quarter of Latino students stop at this level, effectively self-selecting themselves out of the college track. Comparatively, 18 percent of White students stop at Algebra I. An additional 19 percent of Latinos stopped after completing Geometry (14 percent for White students), and 22 percent stopped after completing Algebra II (28 percent for White students). All tolled, 80 percent of Latino students finished at the Algebra II level, as did 68 percent of White students—a 12 percent gap. Stated another way, 32 percent of White students took some level of advanced mathematics compared to only 20 percent of Latino students. The percentage of White students that completed Trigonometry compared to Latino students is one third higher, 50-percent higher at the pre-calculus level, and 130 percent higher at calculus.

Exhibit I-8. Mathematics Course-Taking Patterns of 1988 8th-Grade Latino and White Students during High School (percent after comma)



Advanced Placement. The College Board's Advance Placement program is recognized as the ultimate set of preparation courses for postsecondary education. By design, many colleges and universities accept successfully completion and test scores for university credit. As well, some university systems provide extra GPA values for AP course work completed. Thus, for students interested in university-level studies, and moreso for those interested in attending selective institutions, AP programming is an important component of the high school curriculum. International Baccalaureate is a comparative program, but the NELS database was only matched with College Board data.

On the whole, only a small percentage of 1988 NELS cohort took an AP test during high school. AP English was the most popular AP test, but only 2.7 percent of the total 1988 cohort took that test. Still, AP test-taking comparisons within the NELS study are statistically significant and worthy of analysis.

Exhibit I-9 (next page) illustrates the test-taking percentages of Latino and White NELS students. In AP English, 3.1 percent of White students took the test compared to 0.4 percent of Latino students. Thus, White students were about eight times as likely to take the AP English test, or a ratio of 8:1. AP US History and AP Mathematics posted similar results, with 2 percent of White students taking the test compared to 0.8 percent of Latinos, providing a ratio of 2.6:1. AP Foreign Language was the only test where Latinos approached the test-taking percentages of White students. Of course, these data only report the percentage of students who take the test.

To give an idea of the number of AP test takers, the College Board provided us with data from the 1992 cohort. As can be seen in Exhibit I-10, 73 percent of all AP test takers during that year were White, and only 7 percent where Latino. The White AP test-taking population was approximately representative of the NELS population, but the Latino test-takers were significantly underrepresented by four percentage points (7 percent vs. 11 percent of NELS population).

Of course, taking the test is only part of the AP process. How one scores on the test can be very important. Unfortunately, the NELS study doesn't allow us to look at AP test scores.

The AP test is scored on a 5-point scale, where 0 is the lowest and 5 is the highest. Many colleges and universities give course credit for scores above 3, while others raise the bar to 4, and some to 5. There are selective colleges that do not accept credit, but still use a high AP test score during their admissions process. Exhibit I-11 the number of total AP test takers for Latino and White students in 2003, by test score.

The first thing the reader may notice in Exhibit I-11 is that Latino students actually have a higher percentage of "5's" than White students. This is good, but it is probably due to the high percentage of Latino students who took the AP Spanish test. Fifty-one percent of Latino students scored a 3 or higher, potentially giving them a course credit during college. This compares with 65 percent of White students. However, half (49 percent) of all Latino AP test takers scored a 2 or lower, which doesn't qualify for academic credit. Only one-third of White students did the same.

Exhibit I-9. Percentage of 1988 8th-Grade NELS Students Taking AP Tests, by Test Area

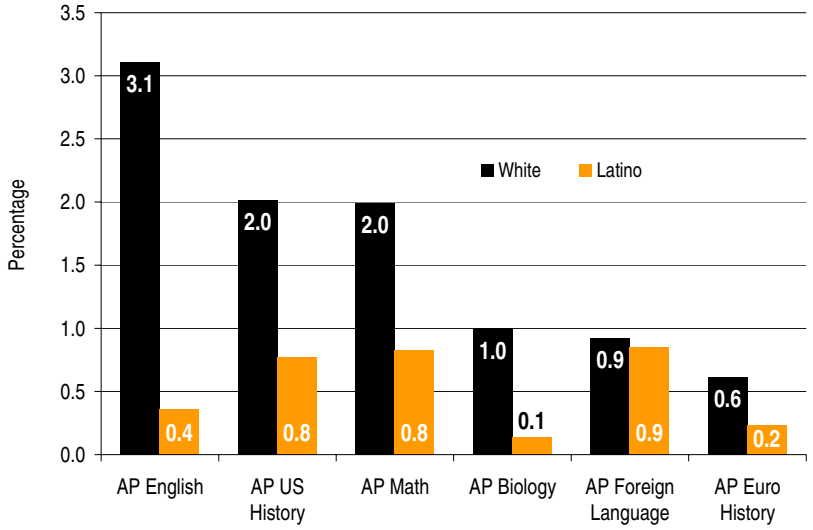


Exhibit I-10. Number and Percentage of 1992 AP Test Takers, by Race/Ethnic Group, as compared with NELS Population Distribution

Race/Ethnic Group	Number of Test Takers	% of Test Takers (b)	% Distribution of NELS Population	Difference (Δ)
White	264,975	73	72	1
Asian	46,815	13	3	10
Latino (a)	**27,073**	**7**	**11**	**-4**
African American/Black	15,423	4	13	-9
Other ethnic group	6,763	2	0	2
American Indian/Alaskan	1,682	0	1	-1
No response (b)	25,411	7	NA	NA
TOTAL (not including "no response")	362,731	100%	100%	100%

(a) Includes Mexican American, Puerto Rican, and Other Hispanic.
(b) Denominator does not include AP test takers who declined to acknowledge their race /ethnicity ('no response'), and who were not included in the total classification.

SOURCE: The College Board (upon request of the authors)

College Placement Testing. A major hurdle toward college attendance, at least at selective institutions, is the participation in a college placement examination, such as the SAT or ACT. Fifty-nine percent of White students took the SAT or ACT compared to 44 percent of Latino students—a gap of 15 percent.

The SAT, which is commensurate to the ACT in many ways, has two main components: mathematics (SAT-M) and verbal (SAT-V). The two scores are often summed to provide a "composite" score that institutions use in the

admissions process. Historically, the mean composite SAT score for White students has been significantly higher than Latino and several other race/ethnic groups. The NELS cohort buttressed that trend (see Exhibit I-12), with White students scoring 157 points higher than Latino students on a 1600 scale (946 vs. 789). On the SAT-M, White students scored 504 (on an 800 scale) vs. 433 for Latino students, and 454 vs. 379 on the SAT-V.

Though these scores were recorded over a decade ago, recent data from the College Board confirms that the SAT outcomes today are as they were for the 1988 8th-grade cohort. Data from the 2003 College Bound Seniors Report illustrate that, while the scores have gone up slightly for all groups (without consideration of the SAT re-centering in the mid-1990s), the gap is largely the same between White and other groups of Hispanic origin (Exhibit I-13). White students scored 3-points higher than Latino students on the ACT test (21.6 vs. 18.4).

Exhibit I-11. Number of 2003 AP Test Takers, by Race/Ethnic Group and AP Score

	LATINO		WHITE		ALL STUDENTS	
AP Grade	Number of TOTAL EXAMS	%	Number of TOTAL EXAMS	%	Number of TOTAL EXAMS	%
5	30,346	17.1	152,054	13.6	237,524	13.9
3 and above	89,890	51	725,620	65	1,048,510	61
2 and below	88,081	49	392,828	35	656,697	39
Total	177,971	100.0	1,118,448	100.0	1,705,207	100.0
MEAN GRADE		2.74		3.03		2.95

SOURCE: The College Board

Exhibit I-12. SAT Composite, Math, and Verbal Scores for 1988 8th-Grade NELS Latino and White Students

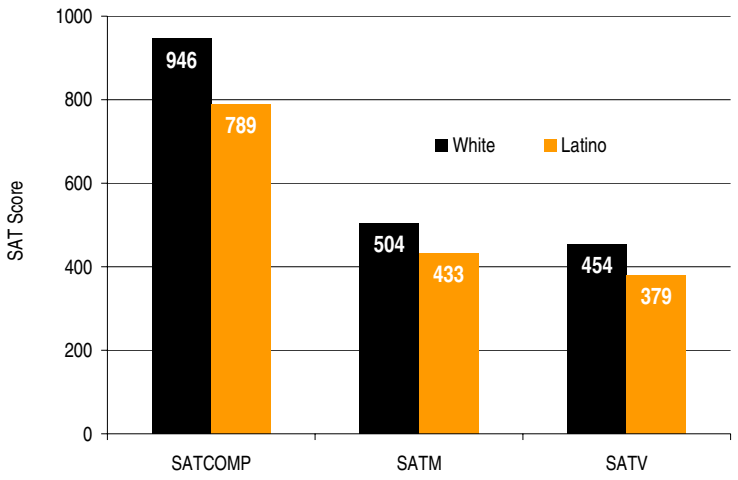


Exhibit I-13. SAT-M and SAT-V Scores for 2003 College Bound Seniors, by Race/Ethnic Groups

Race/Ethnic Group	SAT-M	SAT-V
White	534	529
Mexican or Mexican American	457	448
Puerto Rican	453	456
Latin American, South American, Central American, or Other Hispanic or Latino	464	457

SOURCE: The College Board (2003). *2003 College-Bound Seniors: A Profile of SAT Program Test Takers.* New York, NY: College Entrance Examination Board.

Table I-2. Academic Characteristics of the 1988 8th-Grade NELS Cohort (NELS:88/00)

	All	White	Latino	*t*	p > t	
Eight-Grade Reading Achievement Test Score Distribution						
Quartile 1 (Low)	23.1	19.5	32.3	-4.79	0.00	***
Quartile 2	25.2	22.4	33.6	-3.75	0.00	***
Quartile 3	24.9	26.7	21.6	2.02	0.04	**
Quartile 4 (High)	26.8	31.5	12.5	9.97	0.00	***
Eight-Grade Mathematics Achievement Test Score Distribution						
Quartile 1 (Low)	22.7	16.2	33.8	-6.57	0.00	***
Quartile 2	24.5	23.5	33.3	-3.55	0.00	***
Quartile 3	25.5	28.0	21.5	2.93	0.00	***
Quartile 4 (High)	27.3	32.3	11.4	13.23	0.00	***
Preparation for College						
Not Qualified	44.3	40.5	58.6	-7.40	0.00	***
Minimally Qualified	13.9	13.6	16.1	-1.26	0.21	
Qualified	41.8	46.0	25.3	9.65	0.00	***
HS Academic Curriculum Intensity Distribution						
Quintile 1 (Low)	18.3	17.8	21.2	-1.42	0.16	
Quintile 2	21.6	21.1	22.3	-0.39	0.70	
Quintile 3 (Middle)	19.0	18.2	26.9	-3.05	0.00	***
Quintile 4	20.4	21.4	17.6	1.77	0.08	*
Quintile 5 (Highest)	20.8	21.6	12.0	4.77	0.00	***
Highest Mathematics Course Completed in High School						
Calculus	9.2	9.9	4.3	6.14	0.00	***
Pre-calculus	10.0	10.8	7.1	2.89	0.00	***
Trigonometry	10.5	11.0	8.2	1.68	0.09	*
Algebra2	26.2	27.7	22.2	2.18	0.03	**
Geometry	13.9	13.7	18.7	-1.90	0.06	*
Algebra1	20.0	18.0	25.1	-2.95	0.00	***
Other math	10.3	9.0	14.5	-1.95	0.05	*
Number of Remedial Courses Completed in High School						
Remedial Mathematics						
None	86.1	87.0	79.3	3.32	0.00	***
One	6.7	6.5	7.4	-0.66	0.51	
Two	5.2	4.7	9.7	-3.11	0.00	***
Three or more	2.1	1.8	3.6	-2.00	0.05	**
Remedial English						
None	89.0	90.1	82.7	3.31	0.00	***
One	3.1	2.9	6.2	-2.43	0.02	**
Two	4.1	3.9	4.4	-0.31	0.76	
Three or more	3.7	3.2	6.8	-3.04	0.00	***

**P<0.1, **P<0.05, ***P<0.01*

Table I-2. Academic Characteristics of the 1988 8th-Grade NELS Cohort (NELS:88/00) (Continued)

	All	White	Latino	t	p > t	
Remedial Reading						
None	95.3	95.5	92.6	1.62	0.11	
One	3.1	3.2	2.3	0.75	0.45	
Two	1.2	0.9	4.4	-3.05	0.00	***
Three or more	0.5	0.4	0.7	-0.87	0.39	
8th-grade school sector						
Public	91.2	90.3	93.5	-1.87	0.06	*
Private	8.8	9.8	6.5	1.87	0.06	*
Percent of Students Who Completed High School by 2000	92.3	93.2	86.4	2.83	0.01	***
Types of HS completion by 2000						
No high school credential	7.6	6.7	13.3	-2.75	0.01	***
Standard high school diploma	84.4	86.4	76.6	-0.83	0.41	
GED or other high school equivalency	7.9	6.8	9.8	-1.97	0.05	*
Certificate of attendance	0.2	0.1	0.3	3.64	0.00	***
Percentage of Students Who Took ACT or SAT Tests	55.1	59.4	44.0	7.03	0.00	***
SAT and ACT Mean Test Scores						
SATCOMP Score	921.3	946.0	788.9	6.38	0.00	***
SAT-M Score	493.2	503.7	433.0	4.93	0.00	***
SAT-V Score	441.5	453.8	379.3	6.33	0.00	***
ACT Score	21.2	21.6	18.4	8.75	0.00	***
Average High School GPA	2.7	2.8	2.5	4.98	0.00	***
Percent of Students Who Took AP Tests						
Took AP Biology Test	0.9	1.0	0.1	3.84	0.00	***
Took AP Chemistry Test	0.4	0.4		4.01	0.00	***
Took AP English Test	2.7	3.1	0.4	6.60	0.00	***
Took AP European History Test	0.5	0.6	0.2	2.16	0.03	**
Took AP US History Test	1.8	2.0	0.8	2.43	0.02	**
Took AP Foreign Lang. Test	0.9	0.9	0.9	0.13	0.89	
AP Mathematics Test	2.0	2.0	0.8	2.89	0.00	***

**P<0.1, **P<0.05, ***P<0.01*

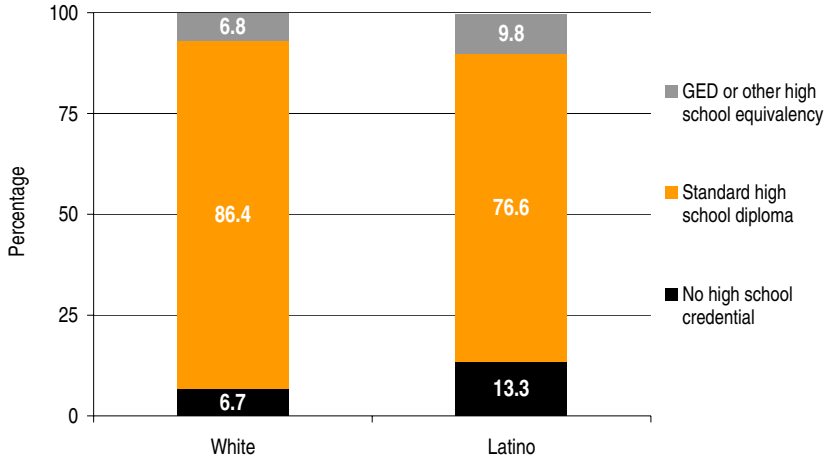
ACCESS TO POSTSECONDARY EDUCATION

In this section we look at various indicators of postsecondary access, starting with high school completion, which is the obvious first major step to a postsecondary experience. But our discussion will then look at matriculation rates to postsecondary institutions by institution type, cost, and selectivity.

High School Completion. The NELS database logs high school completion by the year 2000, 8 years after scheduled graduation. In the case of the NELS cohort, 93.2 percent of White students graduated with a diploma as did 86.4 percent of Latino students (Exhibit I-14). Of those that graduated, 86.4 percent of White students received a standard diploma compared to 76.6 percent of Latino students. Almost 10 percent of Latino youth received a GED, 3 percent higher than White students (6.8 percent).

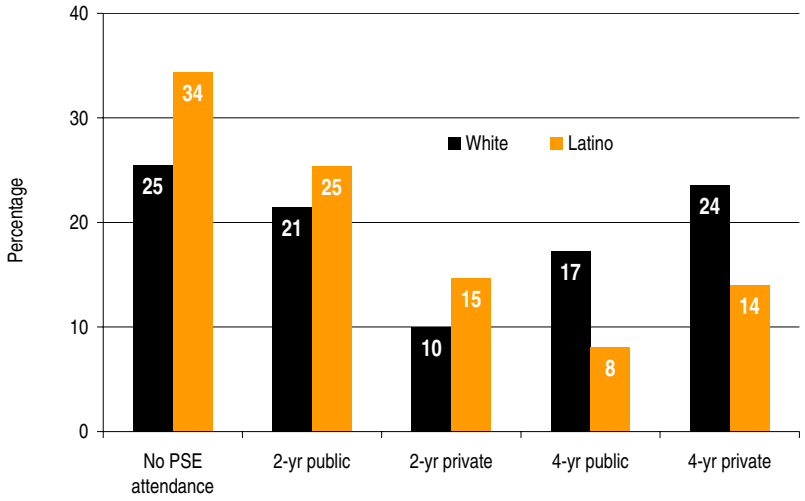
Postsecondary Enrolment. By the year 2000, 8 years after scheduled high school graduation, two-thirds of Latino students attended some type of postsecondary institution for some duration of time, compared to 74.5 percent of White students. This 10 point difference further amplifies the opportunity that White students have compared to Latino students.

Exhibit I-14. Distribution of 1988 8th-Grade NELS Latino and White Students by High School Graduation Credential



As can be seen in Exhibit I-15, Latino students were more likely to have enrolled at two-year institutions than at four-year institutions. Although findings for public institutions in this exhibit are not statistically significant due to small sample sizes, these findings appear to mirror the postsecondary reality for Latino students. White students are much more likely to attend a four-year public institution than a Latino student (17 percent vs. 8 percent) with a similar pattern at a four-year private institution (24 percent vs. 14 percent).

Exhibit I-15. First Type of Postsecondary Institution Attended by 1988 8th-Grade NELS Latino and White Youth



Tuition Charges. The average tuition charge for Latino students is far lower than that for White students. On average, Latino students paid $3,978 for tuition while White students paid $5,981 per year, a 50 percent increase. This mostly reflects the fact that Latino students are more likely to attend two-year institutions compared to White students, but one might also consider that White students are more likely to attend higher-selective, higher-priced institutions. However, data show only small differences in enrollment patterns by institutional selectivity (see Exhibit I-16).

Exhibit I-16. Distribution of 1988 8th-Grade NELS Latino and White Students by Selectivity of Their First Postsecondary Institution Attended

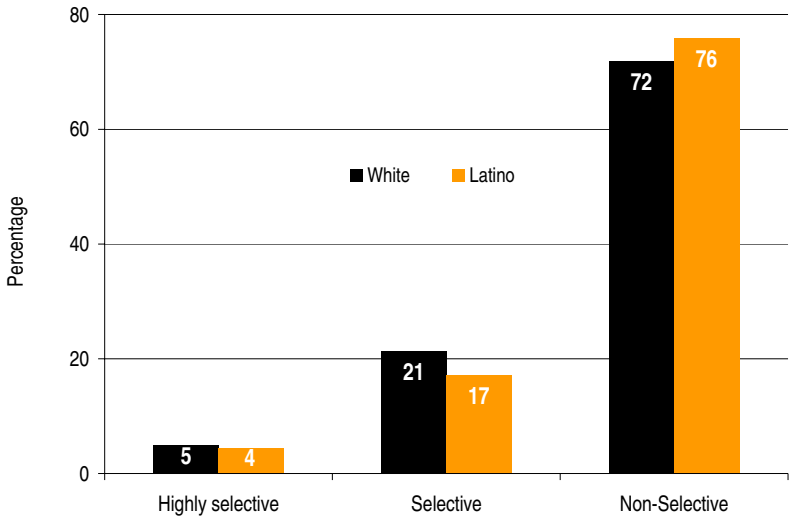


Table I-3. Characteristics of Postsecondary Access for the 1988 8th-Grade NELS Cohort (NELS:88/00)

	All	White	Latino	*t*	p > t	
First Type of PSE Institution Attended						
No PSE attendance	27.4	25.5	34.4	-2.52	0.01	**
Lee than a 2-year institution	3.1	2.2	3.4	-1.78	0.08	*
2-yr public	21.8	21.5	25.4			
2-yr private	10.4	10.0	14.6	-2.51	0.01	**
4-yr public	15.6	17.3	8.1			
4-yr private	21.7	23.6	14.0	8.32	0.00	***
Average tuition for 1st PSE attended [1]	5,661	5,981	3,978	5.14	0.00	***
Selectivity of first PSE attended						
Highly selective	5.7	5.0	4.4	0.40	0.69	
Selective	21.0	21.4	17.2	1.09	0.28	
Non-Selective	71.8	71.9	75.9	-1.02	0.31	
Open-Door	0.2	0.1	1.3	-1.25	0.21	
Unrated	1.4	1.6	1.1	0.60	0.55	

**P<0.1, **P<0.05, ***P<0.01*

[1] *Universe is made up of students whose first true institution attended was either 2-year or 4-year institution.*

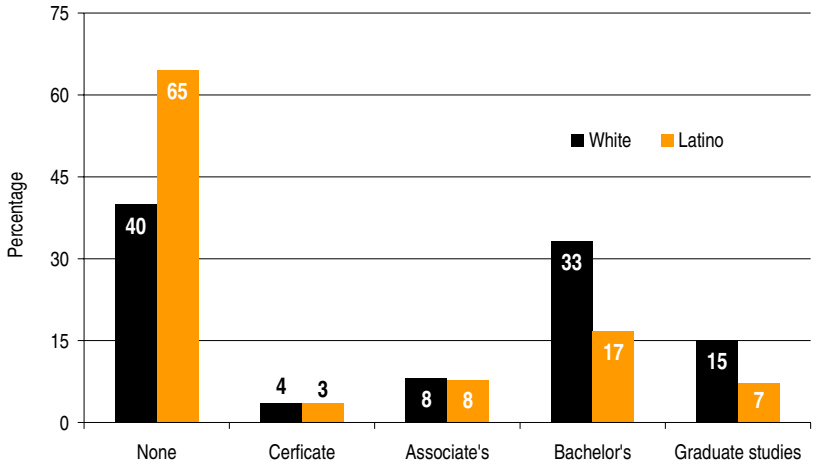
[2] *4-year only*

POSTSECONDARY PERSISTENCE AND COMPLETION

Degree Attainment. The major story here is not who attained, but who didn't. Almost two-thirds of Latino students who enrolled in postsecondary education, or 65 percent, did not earn a degree by the year 2000. Comparatively, 40 percent of White students did not complete. Of those that did complete, the type of degree completed is quite different between the two groups (see Exhibit I-17).

At the certificate and Associate's levels, the completion rates are similar between Latinos and Whites, 4 and 8 percent respectively. However, this finding suggests that the retention of Latino students is less than White students, considering that a higher percentage of Latino students attended two-year institutions. The opposite can be said about the Bachelor's and graduate degree levels, where a higher percentage of White students attended compared to Latino students. Still, the difference in percentage completions is quite large. Half of all White postsecondary students ended up with at least a Bachelor's degree. Only 24 percent of Latino students did the same. One third (33 percent) of all White students received a BA, compared to 17 percent of Latino students, and 15 percent of all White students went on and received a graduate degree, compared to 7 percent of Latino students. Thus, as with postsecondary enrollment figures, Latino students are skewed toward lower types of education, resulting in about half the percentage of students earning higher end degrees—specifically Bachelor's and graduate degrees—than White students.

Exhibit I-17. Distribution of 1988 8th-Grade NELS White and Latino Students by Highest Degree Attained by 2000



Attendance Patterns. There are two important indicators of attendance patterns for students. The first is whether students attend full-time or part-time, the other an observation of the consistency of their attendance. Although attending part-time and in a consistent pattern may be a necessity and choice for students, it is widely known that both options have negative consequences on the ability of students to persist and complete a degree program (Adelman, 1999).

Of all postsecondary students, over half of Latino students attended in a part-time status (53.3 percent). This is skewed by the fact that 62.1 percent of Latino students attended part-time at the two-year level, where most students enroll. Comparatively, 37.3 percent of all postsecondary White students attended part-time with 51.6 percent of the two-year students attending part-time. At the four-year level, slightly more than one third (37.4 percent) of Latino students attended part-time compared to 26.4 percent of White students.

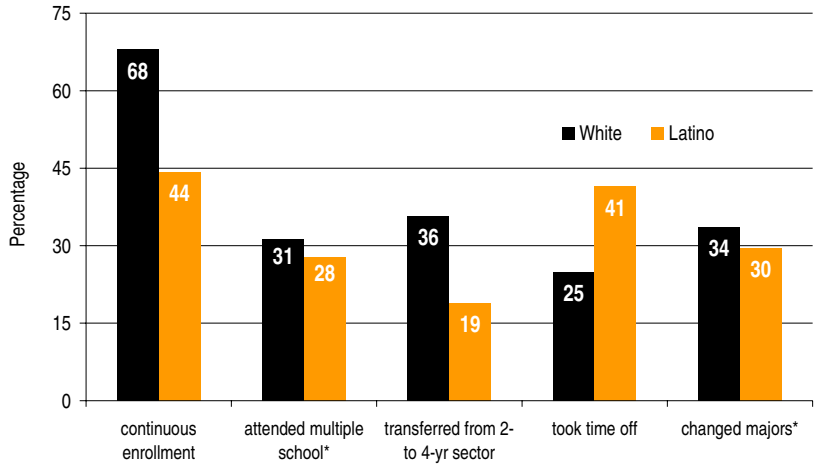
With regard to continuous enrollment, two-thirds (67.9 percent) of White postsecondary students remain in continuous enrollment until degree completion compared to 44.3 percent of Latino students (Exhibit I-18). As well, 41.4 percent of Latinos took time off compared to 24.9 percent of White students.

Other continuity indicators, such as the attendance of multiple schools, transferring from two- to four-year schools, and changing majors, which are often thought of as negative retention indicators, show that White students do these things at higher levels than Latino students. For instance, 36 percent of White students transfer from the two- to the four-year level, com-

pared to only 19 percent of students. The attendance of multiple schools and change of major indicators are not statistically significant, but still show that White and Latino students do both at similar levels. Considering that White students have far better degree outcomes than Latino students, one may suggest that the choice of multiple schools, which would also include the transfer from 2- to 4-year schools, is done by a higher percentage of White students for the expansion of their postsecondary options, and not because they are moving around the postsecondary level with no plan. Regarding a change in majors, a change is not necessarily a negative move, especially if it is a clear decision to do if it results in a closer move towards one's goals. But movement for the sake of movement can be negative.

These data suggest that Latino students again are handicapped from the potential of degree completion because of their attendance patterns, whether in regard to their full-time participation or consistence of participation.

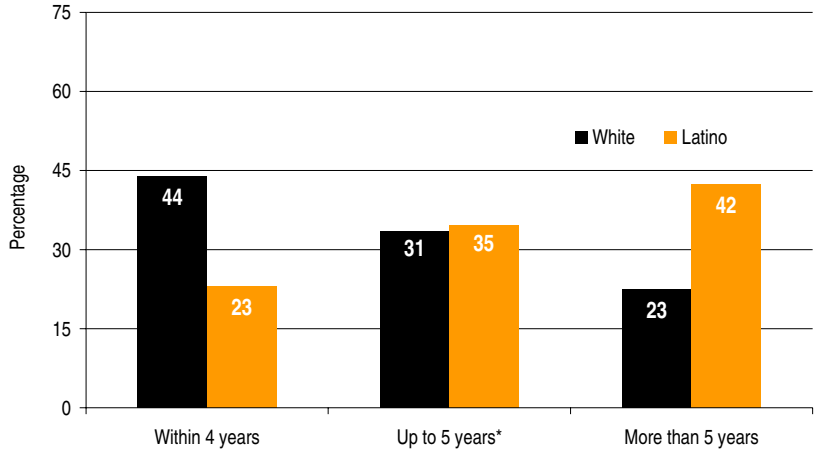
Exhibit I-18. Continuity of Enrollment for 1988 8th-Grade NELS White and Latino Postsecondary Students



*Not statistically significant

Delay of Entry to PSE. Latino students were more likely to delay entry into postsecondary education following successful graduation from high school. A gap of 5.5 points between Latinos (77.6 percent) and White students (83.1 percent) exists with regard to entering postsecondary education within 7 months of high school graduation. Conversely, 12.6 percent of Latino youth delay more than 20 months—close to two years—compared to 8.7 percent of White youth.

Exhibit I-19. Time for Bachelor's Degree Completion for 1988 8th-Grade NELS White and Latino BA Students



*Not statistically significant

Time to Degree. There has been much talk of the time needed to complete a four-year degree program. As can be seen in Exhibit I-19, almost half (44 percent) of White students graduate within the four-year timeline of a traditional Bachelor's degree. Less than one quarter (23 percent) of Latino stu-

dents are able to do the same. At the other end of the distribution, the roles of Whites and Latinos flip-flop: 42 percent of Latino students who graduated with a BA did so in 5 years or more, compared to 23 percent of White students. Part of this discrepancy can be attributed to the larger percentage of part-time Latino students, but a greater time-to-degree figure certainly impacts the ability of students to persist to degree as well as the potential to incur further debt.

Credits Earned. At the two-year level, credits earned by Latino and White students are relatively equal. Most students who enrolled in a two-year institution earned less than 10 credits. Thus, these students mostly attended in a casual manner, with no degree in hand at the end of their experience.

At the four-year level, we see a stronger differentiation between the two student groups. At the high end, 80.6 percent of White students earned 60 credits or more, compared to 64.8 percent of Latinos. Consider that 120 credits are the standard for a Bachelor's degree. At the low end, 1 to 10 credits, 12.5 percent of Latino students were "casual" receivers of the four-year experience compared to 4.8 percent of White students. One step further, 26 percent of Latino students enrolled at the four-year level earned less than 30 credits—one quarter of what is required for a BA—while only 11.9 percent of White students earned at the same level. Therefore, even if one takes into consideration who enrolls at the four-year level, participation once enrolled is quite dissimilar between Latino and White students. Access is not equal, nor is participation.

Table I-4. Persistence and Completion Characteristics for the 1988 8th-Grade NELS Cohort (NELS:88/00)

	All	White	Latino	*t*	p > t	
Highest PSE degree attained by 2000*						
None	44.1	39.9	64.6	-7.55	0.00	***
Cerficate	3.6	3.6	3.5	0.10	0.92	
Associate's	7.8	8.1	7.8	0.18	0.85	
Bachelor's	30.7	33.2	16.8	7.39	0.00	***
Graduate studies	13.8	15.2	7.3	6.09	0.00	***
Attendance pattern						
Part-time attendance	39.2	37.3	53.3	-4.42	0.00	***
2-yr part time	52.6	51.6	62.1	-2.22	0.03	**
4-yr part time	27.6	26.4	37.4	-3.16	0.00	***
Enrollment Pattern						
continuous enrollment	63.9	67.9	44.3	6.73	0.00	***
attended multiple school*	30.7	31.2	27.8	1.28	0.20	
transferred from 2- to 4-yr sector	31.9	35.7	18.9	5.38	0.00	***
took time off	28.1	24.9	41.4	-4.22	0.00	***
changed majors*	33.6	33.6	29.5	1.34	0.18	
Months b/w HS completion and PSE attendance						
Entered within 7 months	81.6	83.1	77.6	1.85	0.07	*
Delayed 8-20 months*	9.0	8.3	9.8	-0.74	0.46	
Delayed more than 20 months	9.4	8.7	12.6	-1.72	0.09	*
Time for Bachelor's completion						
Within 4 years	41.6	43.9	23.0	5.27	0.00	***
Up to 5 years*	33.7	33.5	34.5	-0.20	0.84	
More than 5 years	24.7	22.6	42.5	-4.04	0.00	***
Credits Earned						
earned 0-10 credits	94.0	93.1	96.0	-2.24	0.03	**
earned 11-29 credits	1.3	1.5	1.1	0.58	0.56	
earned 30-59 credits	1.7	1.9	1.5	0.67	0.50	
earned 60 or more credits	3.0	3.6	1.4	2.07	0.04	**
earned 0-10 credits	5.7	4.8	12.5	-3.04	0.00	***
earned 11-29 credits	7.9	7.1	13.5	-2.47	0.01	**
earned 30-59 credits	7.7	7.4	9.3	-0.79	0.43	
earned 60 or more credits	78.7	80.6	64.8	3.80	0.00	***

**P<0.1, **P<0.05, ***P<0.01*

EMPLOYMENT OUTCOMES

The gift of the final followup of the NELS database is the ability to look at occupational trends of the 1988 8th grade class. It should be noted that, because of sample size, the differences between groups are largely insignificant, statistically speaking. However, these data give us a look at where students went following their educational experience.

Occupational Choices. As can be seen in Table I-5, there are three major categories of employment that out perform other areas. These include business, mechanics, and service industries. The largest sector is the service industry, where 35 percent of Latinos earn a living, compared to 30 percent of White students. Second is business, of which 28 percent of Latinos and 25 percent of White students work. And third is the mechanical/laborer sector. This is where approximately 16 percent of our 1988 8th grade Whites and Latino students are earning a living.

Other areas with relatively small percentages of former students, but show statistically significant differences between Latinos and Whites, include Engineering (White = 2.2; Latino = 0.8) and Computer Technology (White = 4.7; Latino = 2.1).

Current Employment Status. Approximately three quarters of our 1988 cohort are working full-time. Seventy-nine percent of White students are now working and 74 percent of Latinos. Sixteen percent of Whites work part-time, as do 17 percent of Latinos.

Income. Eight years after scheduled high school graduation, Latino students earn, on average, $20,074 per year. White students, on the other hand, earn $24,225 per year, a difference of 21 percent.

Table I-5. Occupational Outcomes for the 1988 8th-Grade NELS Cohort in 2000 (NELS:88/00)

	All	White	Latino	*t*	p > t	
Occupational choices						
Education	6.6	7.4	6.3	0.95	0.344	
Business	25.5	25.4	28.0	-1.05	0.292	
Engineering/Mechanical	2.0	2.2	0.8	3.45	0.001	***
Computer Technology	4.4	4.7	2.1	4.02	0.000	***
Health/Medical	8.5	8.4	6.3	2.42	0.016	**
Editors/Writers/Performers	2.2	2.3	2.2	0.04	0.966	
Research/Science/Technology	2.4	2.4	3.4	-0.70	0.487	
Military	1.0	1.0	0.2	3.47	0.001	***
Mechanics, laborers	16.3	15.5	15.6	-0.02	0.982	
Service industries	30.5	29.9	34.7	-1.39	0.164	
Agriculture	0.7	0.8	0.3	2.79	0.005	***
Unemployed	0.0	0.0	0.0	2.10	0.036	**

*P<0.1, **P<0.05, ***P<0.01

Table I-6. Occupational Outcomes for the 1988 8th-Grade NELS Cohort in 2000 (NELS:88/00) (Continued)

	All	White	Latino	*t*	p > t	
Current employment status						
Full-time job	77.1	78.6	74.3	1.40	0.163	
Part-time job	16.8	15.8	17.2	-0.48	0.631	
Work for pay not study	70.3	71.7	67.3	1.44	0.151	
Study not work for pay	4.2	3.6	3.4	0.40	0.690	
Work for pay and study	16.1	15.8	19.1	-1.17	0.242	
Neither work nor study	9.3	8.8	10.2	-0.81	0.418	
Perceived job autonomy						
Someone else decides what and how	9.1	7.6	11.0	-2.09	0.037	**
Someone else decides what you decide how	23.6	23.2	28.8	-2.01	0.045	**
You have some freedom in deciding	49.5	49.7	43.6	1.83	0.067	*
You are basically your own boss	17.8	19.5	16.7	0.94	0.345	
Other Employment Outcomes						
Income in 1999	22,999	24,225	20,074	3.72	0.00	***
Training received in last 12 months	58.1	60.3	54.5	1.66	0.097	*
Training at work	75.1	74.6	73.1	0.34	0.733	
Training off-site	62.7	63.5	60.0	0.72	0.470	
Satisfied with Job	82.4	84.3	79.9	1.32	0.188	
Received public aid in 1999	26.9	19.5	43.1	-2.17	0.031	**
Received public assistance-housing	28.1	20.6	17.9	0.26	0.794	
Received public assistance-food stamps	81.9	70.7	89.6	-2.86	0.005	***

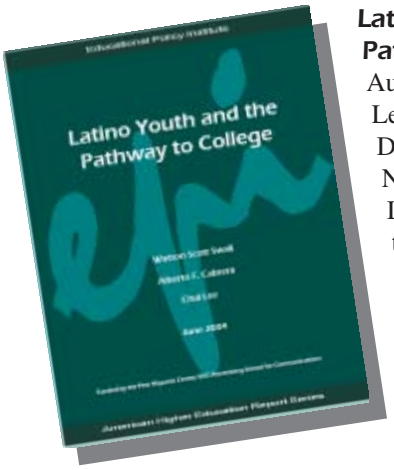
**P<0.1, **P<0.05, ***P<0.01*

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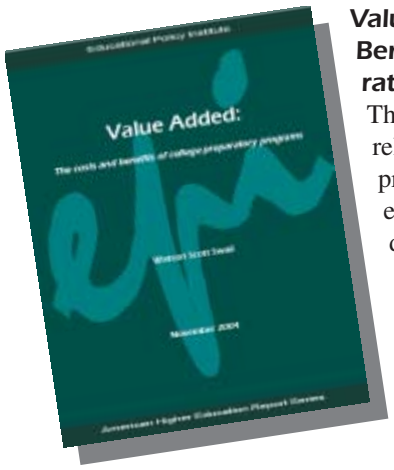
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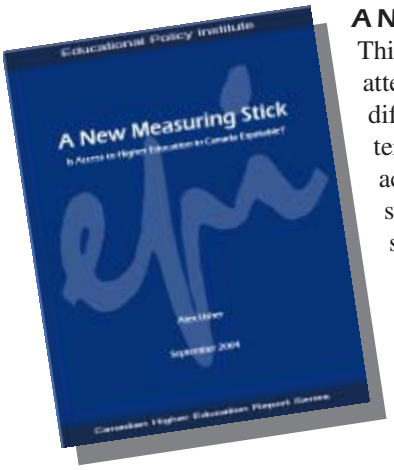
Latino Youth and the Pathway to College

Authors Swail, Cabrera, and Lee use data from the U.S. Department of Education's National Educational Longitudinal Study (NELS) to show how Latino students fair in the educational pipeline.



Value Added: The Costs and Benefits of College Preparatory Programs

This report considers issues related to the complex proposition that the cost of early intervention program delivery is directly and positively tied to the ability of programs to successfully enable students to get into college.



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