



# A New Measure of Educational Success in Texas

Tracking the Success of 8th Graders  
into and through College

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National Center for Higher Education Management Systems (NCHEMS)

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# Introduction

The opportunity of a rewarding future largely depends upon completing a certificate or degree following high school. National employment and earnings statistics bear this out. Unfortunately, only one of every five 8th grade students in Texas achieves this goal within six years of finishing high school, with alarming disparities across racial and gender subgroups.

On behalf of its endorsing partners, Houston Endowment, a private charitable foundation, commissioned the National Center for Higher Education Management Systems (NCHEMS), working with the Texas Higher Education Coordinating Board, to conduct a cohort analysis of every student who started 8th grade in a Texas public school in 1996, 1997, and 1998. The goal was to determine the percentage of Texas' 8th grade students who eventually achieved **any sort of postsecondary certificate or degree** within six years of their expected high school graduation date.

Of the 883,260 public school students who started 8th grade in 1996–98, only 175,489, or 19.9 percent, completed a certificate or degree program in Texas. Even with a slight adjustment to account for certificates and degrees earned outside Texas, the completion rate rises to only 21.9 percent.

Texas maintains a large inventory of public and higher education student success indicators, but the public lacks a single success measure that is easy to understand, not subject to manipulation, and addresses the shared responsibility of its public education and higher education sectors. This report introduces just such a measure: a simple ratio that confidently and accurately compares the number of students who enter 8th grade with the number who earn a certificate or degree within 11 years. This ratio provides a straightforward measure of Texas' success in producing well-educated young people.

We created this report to offer a simple but critically important ratio as the centerpiece within the broader public debate about student achievement in Texas. It is a robust, unambiguous success indicator, and improving it is essential for the future success of Texas. It is up to others in the public and private life of Texas to determine what our state's completion goal should be and how to attain it. To foster that debate, this report will be updated each year for the foreseeable future.

# The Challenge

Increasing levels of postsecondary educational attainment among young people has become an ever more salient imperative in the United States. The Obama administration has established an ambitious goal to address this issue that is aimed at recovering U.S. leadership in the world in terms of the proportion of young adults (ages 25–34) who earn a college credential. But reaching this goal is a formidable task, requiring active cooperation and engagement by teachers and administrators at all grade and college levels. Despite federal exhortations, this must be primarily a state-level effort. Responsibility for education at all levels in the United States is assigned to the states, which provide the bulk of the necessary funding and leadership.

## Purpose of This Report

To pursue this responsibility, states need to know where they stand in achieving their shares of the collective responsibility. Until now, however, all that has been available to educators, citizens, and policymakers is where their states stand with regard to the end goal — the proportion of citizens who have a college credential. They lack information on the flow through the educational pipeline in their states — at what points they lose students — from early secondary schooling to college graduation. The purpose of this report, the first in a series that will be issued annually, is to begin to address this information gap by reporting the forward progress of students enrolled in the 8th grade in a particular state, Texas, which has the data to support such an analysis for three successive groups of 8th graders. While useful to track progress, such data are even more useful when benchmarked against data from other states. This initial report, prepared by NCHEMS with support from Houston Endowment, uses similar data from Florida and from a national study as a benchmark. Subsequent reports will include data on a growing number of states as their data collection and reporting capabilities improve.<sup>1</sup>

## Results

Only one in five 8th grade students enrolled in Texas public schools completes any level of valid postsecondary credentialing (certificate or degree) within 11 years.<sup>2</sup> NCHEMS drew this conclusion from unit record data on the 883,260 Texas students who began 8th grade in 1996 through 1998. After 11 years, NCHEMS identified 175,489, or 19.9 percent, from these 8th grade cohorts who completed a certificate or degree program in Texas. Even with a slight adjustment in these results to account for an estimate of out-of-state completions, the rate rises to only 21.9 percent.

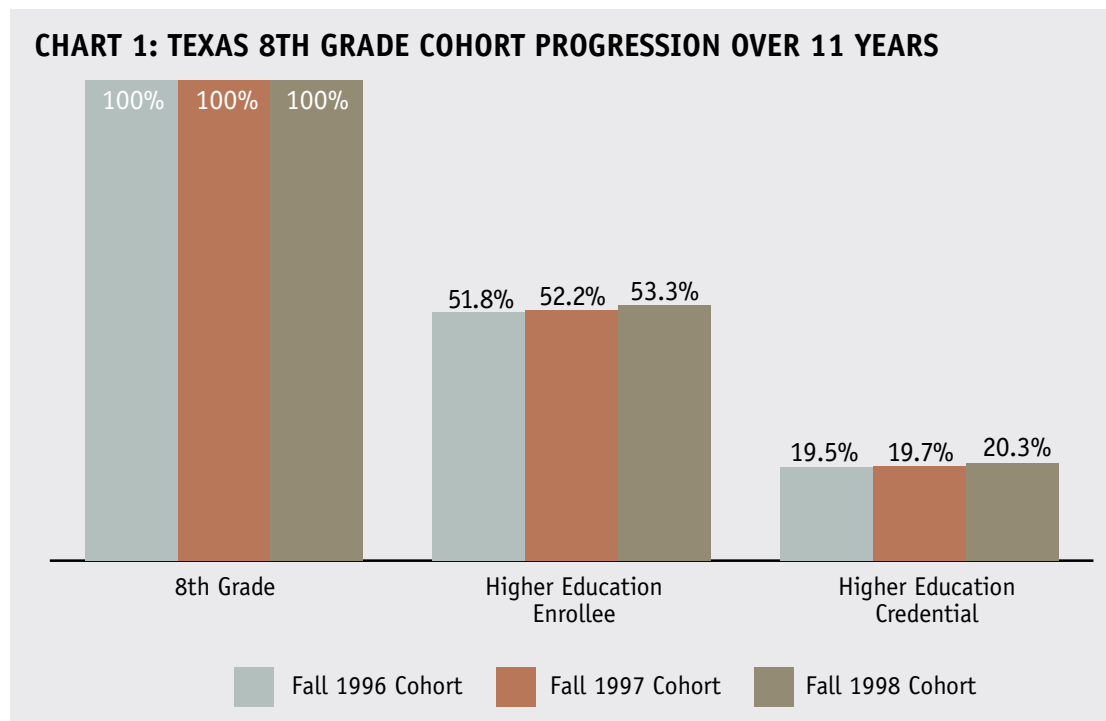
# What Do the Data Tell Us?

## About 20 Percent of Texas Students Earn Credentials

Chart 1 presents the progress into college and to the point of earning a college credential over 11 years for students who were enrolled in the 8th grade in a Texas public school in the fall terms of three successive years (1996, 1997, and 1998).<sup>3</sup>

The college-level results in Chart 1 represent percentages of the original starting group of 8th graders. The more precise meaning of the three bars in the chart for each starting year is explained below:

- **8th Grade Enrollment:** This first set of bars shows the percentage of students who were enrolled in a Texas public high school in the fall term of the years represented. The two subsequent sets of bars in the chart are sub-populations of these starting groups, represented as percentages. As such, the percentage for the first set of bars, in Chart 1 and in following corresponding charts, is 100 percent.
- **Higher Education Enrollee:** This is the proportion of the original starting group of 8th graders who enrolled in any postsecondary institution in the state within the 11-year tracking window after ceasing enrollment in high school. Enrollments are counted for both public and private institutions insofar as they can be determined from Texas postsecondary unit record databases. Students still enrolled in high school — for example, in Early College High School or other dual enrollment programs — are not counted here until they cease enrollment in high school. But students do not necessarily have to have earned a high school diploma, so long as they enroll in postsecondary education. They may have been granted a GED before attending, or they may have gone directly into a community college without officially graduating from high school.<sup>4</sup>



- **Higher Education Credential:** This is the proportion of the original starting group of 8th graders who earned a postsecondary credential from a Texas college or university (again either public or private) within the 11-year tracking window. Postsecondary credentials include bachelor's degrees, associate degrees, and college-level certificates of one year or more duration.

Chart 1 first tells us that progression rates for 8th graders in Texas into the postsecondary educational pipeline do not vary much over the three starting years presented. About half of starting 8th graders enrolled in college within the 11-year tracking window and about 20 percent had earned a college-level credential within that same period of time. Results that are this consistent for equivalent groups of students over successive time periods suggest that the trends they reflect are real. Both K–12 and higher education in Texas will need to improve their performance if the state is to contribute its share toward meeting national goals. One message of Chart 1, though, is that postsecondary progression rates improve slightly over time.

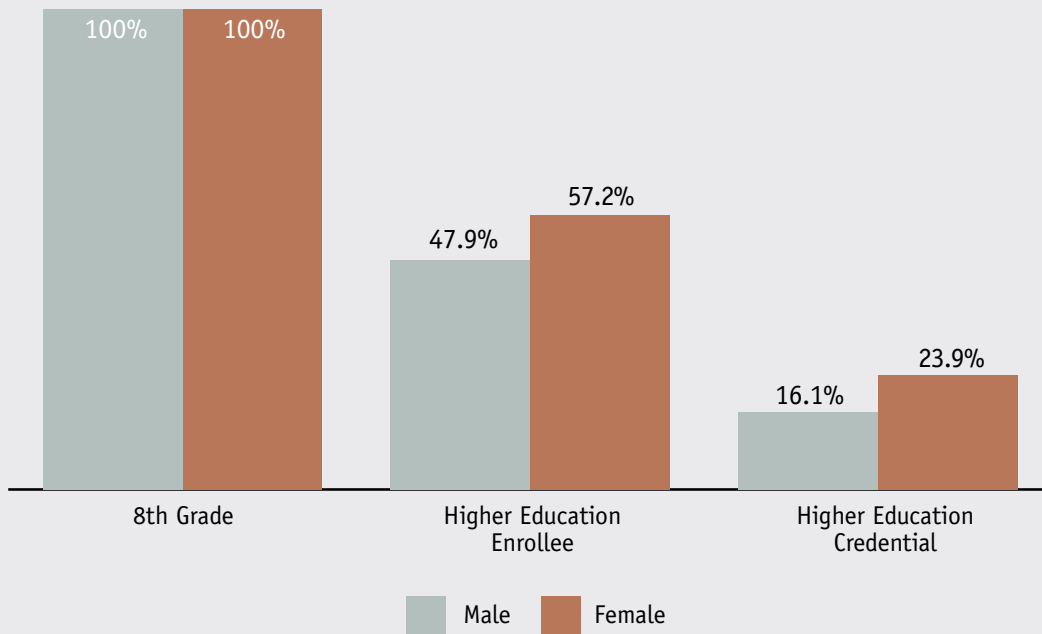
### *Texas Students: Gaps by Gender and Race/Ethnicity*

Charts 2 and 3 present the same results broken down by gender and race/ethnicity for all three groups of 8th graders combined.<sup>5</sup>

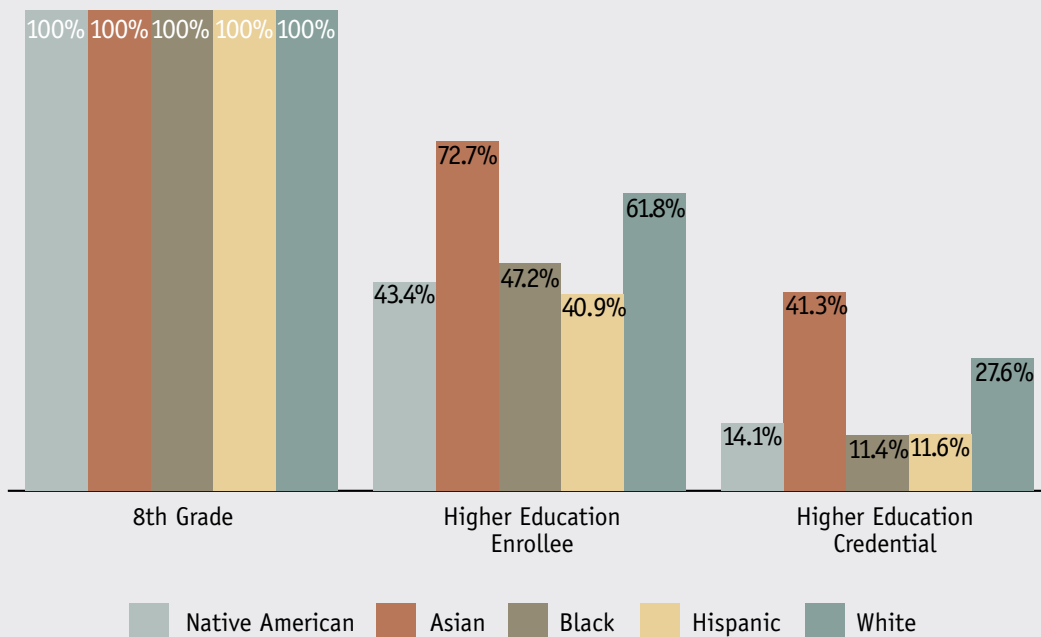
The message of Chart 2 is that female students are consistently more successful in making progress into postsecondary education than are their male counterparts. College-going rates for women are almost 10 percentage points higher than those of their male counterparts. However, male students close the gap to about eight percentage points when it comes to earning a postsecondary credential.

Chart 3 shows a wide disparity between white students and underserved minorities (black, Hispanic, and Native American students) exists by the time students enter postsecondary education. These gaps further expand during the postsecondary years: white students' rates of earning a college credential are two to two and a half times higher than those of Hispanics and blacks. Given the state's growing Hispanic population, this means that it will be impossible for Texas to contribute its share in reaching national attainment goals without improving Hispanic college-going and graduation rates. The gap between Asian and white students is almost 11 percentage points for entering college. The gap increases to nearly 14 percentage points for earning a college credential.

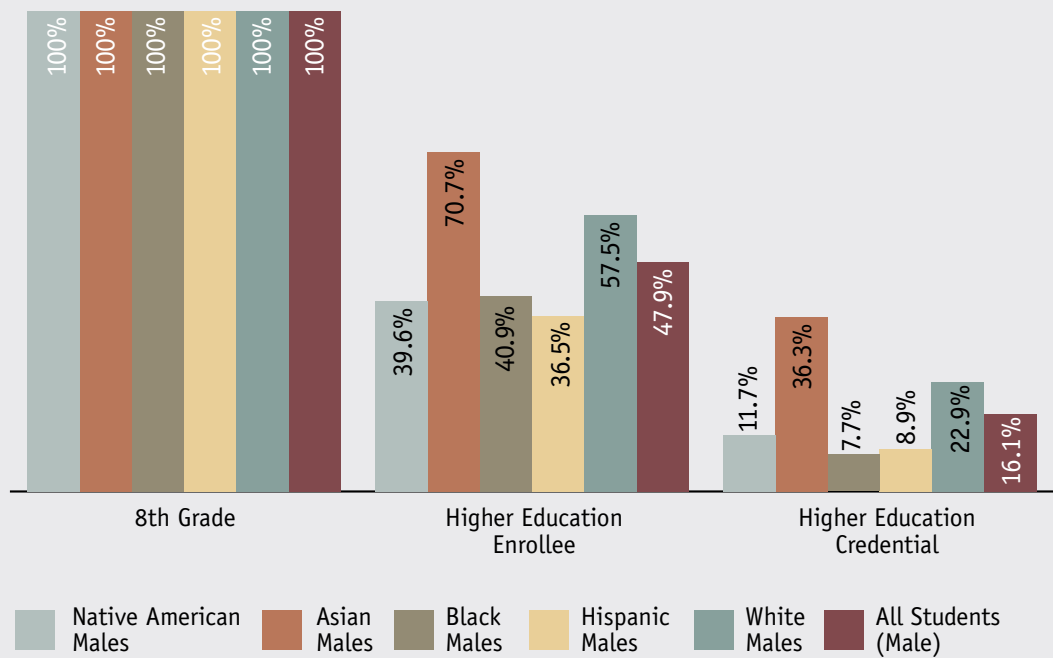
**CHART 2: TEXAS 8TH GRADE COHORT PROGRESSION BY GENDER (COMBINED COHORTS)**



**CHART 3: TEXAS 8TH GRADE COHORT PROGRESSION BY RACE/ETHNICITY (COMBINED COHORTS)**



**CHART 4: TEXAS 8TH GRADE COHORT PROGRESSION: MALES  
(COMBINED COHORTS)**



### *A Special Challenge for Texas*

Disaggregating results by gender and ethnicity highlights well-known achievement disparities.<sup>6</sup> Of special note are the achievement results for Texas’ boys and young men of color (see Chart 4). Attainment rates are two and a half times higher for white males than they are for their Hispanic male peers. During the three years analyzed, 226,487 black and Hispanic boys started 8th grade in Texas public schools. Only 19,375, or 8.5 percent achieved a certificate or degree from a Texas college or university within the 11-year period of analysis. In light of the tremendous growth in Texas’ young Hispanic population, it will be difficult for the state’s overall completion rate to improve without special efforts to elevate the success rates of all students and of these boys in particular.

### *Comparing Texas to Florida and the Nation*

There are few external benchmarks, but comparable data are available for Florida and for a large-scale national longitudinal study conducted 10 years ago.<sup>7</sup> Chart 5 shows these benchmarked results.

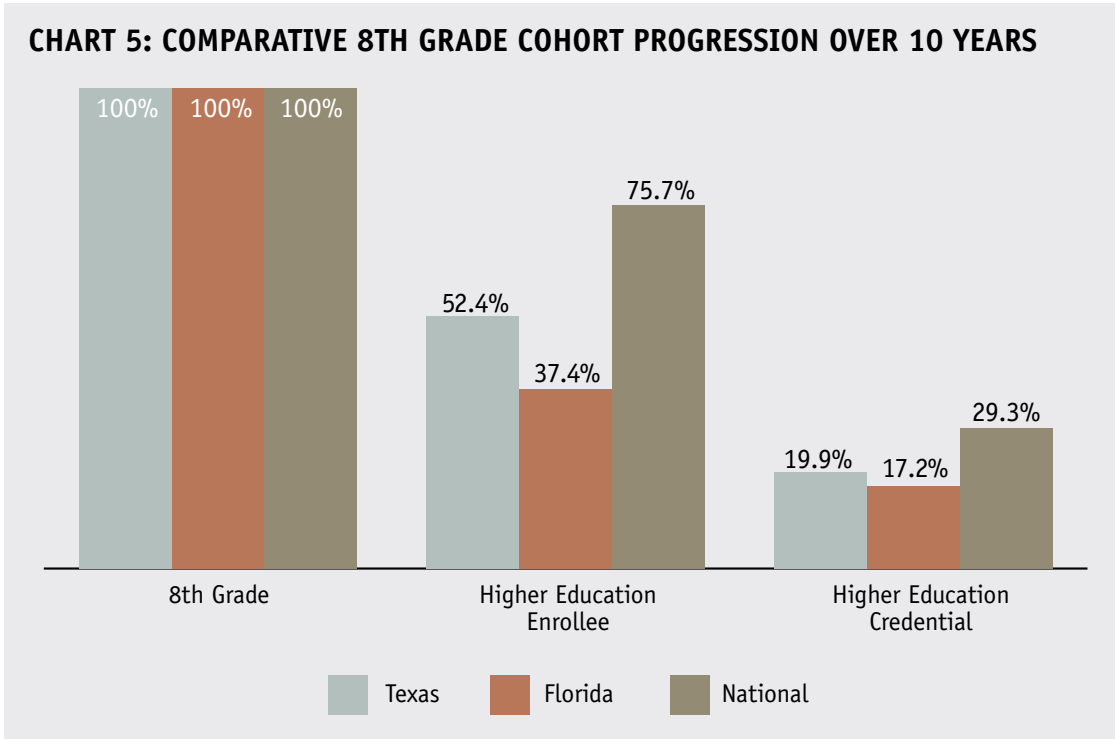
As is apparent, Florida’s postsecondary credentialing rate is 2.7 percentage points below that of Texas, but the proportion of 8th graders entering postsecondary education within the study period is 15 points lower. While it is not possible to explain these differences definitively, we know from available cross-sectional data drawn from the U.S. Census that Florida has a lower college-going rate but a higher college completion rate than Texas among those students who actually enter college. Meanwhile, the earlier national sample of 8th grade students substantially outperforms both Texas’ and Florida’s 8th grade starters 11 years later. Although valid comparisons are inherently difficult because of these differences in time, both Texas and Florida are relatively low performers nationally when it comes to collegiate graduation rates.



The performance gap holds for students of all races and ethnicities. For example, 11.4 percent of Texas black 8th grade starters earned a postsecondary credential 11 years later compared to 9.3 percent of their Florida counterparts and 17.1 percent of the national sample. The corresponding rate for Hispanic Texans is 11.6 percent, with Florida and national counterparts of 13.3 percent and 15.1 percent. Attainment rates for white and Asian students, while higher than those of their black and Hispanic peers, lag behind those of students in the national sample: 27.6 percent of white students and 41.3 percent of Asian students in Texas, 21.6 percent of white students and 35.1 percent of Asian students in Florida, and 34.2 percent of white students and 51.4 percent of Asian students in the national sample.

Parallel patterns are also apparent for gender, with female students outperforming their male counterparts in Texas, Florida, and the national sample by 7.8 percent, 8.3 percent, and 5.5 percent respectively.<sup>8</sup>

These results are the most robust estimates of longitudinal progress that can be made with confidence at this time using available data. As such, the numbers shown at each stage of the pipeline represent minimum estimates that could be higher if a wider array of data were available. The most important problem here is that the data do not take interstate mobility into account. Secondary school students may move out of state after enrolling in the 8th grade in Texas and subsequently earn a high school diploma, enter college, or earn a postsecondary credential without these events being captured by the unit record data systems maintained by Texas educational agencies. A smaller problem, currently being addressed by most states, is that their postsecondary databases may not contain records from all private and proprietary institutions operating with the state.<sup>9</sup> The first problem can be partially addressed by tapping national data sources like the National Student Clearinghouse (NSC), which maintains records on postsecondary enrollments and awards given across all 50 states. For example, using NSC-based data to estimate out-of-state credentialing yields an additional 2.0 percentage points of credentials earned for Texas, bringing its total to 21.9 percent of students earning credentials. Florida gains an additional 2.2 percentage points, bringing its total to 19.4 percent of students earning credentials.<sup>10</sup>



# Conclusion and Further Plans

This initial report, *A New Measure of Educational Success in Texas*, provides robust information to inform state educational policy but also is intended as a proof of concept. The current report demonstrates the feasibility and utility of long-term tracking from early secondary school through collegiate study and credentialing. Such tracking would provide states with a powerful tool for assessing progress and guiding interventions as they and the nation pursue the imperative of a more educated young adult citizenry.

From a substantive perspective, this initial news is sobering. Texas and its benchmark state Florida have a long way to travel to attain global competitiveness. Given the data now coming online from state agencies and the NSC, future reports will be based on more precise data and will include finding from more states. The availability of large amounts of postsecondary enrollment and credentials data from the NSC next year will allow the tracking of these behaviors on a national basis. Meanwhile, maturing state education agency longitudinal databases will allow a number of new benchmark states to be added. Plans are on track to add Washington, Oregon, and Hawaii next year, with another half dozen states in 2013. Given the importance of the goal and magnitude of the need, this will be none too soon.

## ENDNOTES

- 1 Appendix A provides a technical description of data sources and their limitations.
- 2 Each 8th grade cohort was followed for 11 years, which is the equivalent of six years after its normal high school graduation date.
- 3 The 11-year tracking period was established to allow starting 8th graders the normal amount of time (five years) to graduate from high school and six additional years to enter and complete college. This six-year postsecondary completion window is consistent with federal postsecondary graduation-rate reporting.
- 4 For example, 5.5 percent of the Texas 8th grade students in the three starting groups later enrolled in a college or university in Texas without having been formally awarded a high school diploma.
- 5 Combining the three groups for purposes of presentation can be justified because the basic results vary only slightly across race/ethnic and gender groups across the three starting groups.
- 6 See Appendices B, C, and D for detailed percentage results and for a breakdown of results by race/ethnicity within gender.
- 7 National Education Longitudinal Study (NELS) 88.
- 8 See Appendices B, C, and D.
- 9 As noted earlier, this is not problematic for Texas and Florida but is currently true of the majority of states that will eventually be added to this report.
- 10 See Appendix A for an explanation of this calculation.

# APPENDIX A

## Data Sources, Calculations, Limitations

### *Where Do the Data Come From?*

State agencies responsible for K–12 and postsecondary education have always kept records of student enrollments. But only recently have they begun to develop the automated recordkeeping and analytical capacity to look at student records over time. And only in the last couple of years have states such as Texas and Florida gained the capacity to track students from K–12 to higher education. Most of the data used in this report come from unit record databases compiled by state education agencies and higher education governing/coordinating boards. Public school districts and postsecondary institutions located in the state provide a limited set of data to these agencies each year for every student they enroll and for every credential they award. These snapshots of student activity can be linked together over time to create longitudinal (cohort) files that show whether and how students re-enrolled or progressed over time and whether they ever earned a degree. Records for the same student across multiple terms are matched using the Social Security Number or other unique identifiers. These files also contain demographic information about each student, which enable progress measures to be broken down and compared across different populations. Because the contents of state unit record databases are confined to students enrolled at institutions within the boundaries of a given state, however, they underreport student success because they miss students who enroll in college in another state. To address this difficulty, data from the National Student Clearinghouse (NSC) on postsecondary enrollment and credentials earned are matched for the students tracked from 2000 onward, using a combination of secure unique identifiers. Colleges and universities across the country voluntarily report a limited number of data elements on all their enrolled students and degrees awarded to the NSC, which then makes these data available for research purposes. NSC data holdings cover more than 93 percent of the college enrollments nationwide.

The national comparison data are from the National Education Longitudinal Study (NELS) 88 conducted by the U.S. Department of Education, which followed a nationally representative sample of students who were enrolled in the 8th grade in fall 1988. While the data definitions used in NELS-88 are comparable to those used to construct the Texas and Florida statistics, the fact that they cover a time period that is almost a decade earlier means that caution should be exercised in making comparisons.

### *What Are the Limitations of the Data?*

The data underlying this report are powerful and path-breaking, but they do have a number of drawbacks. First, because they are drawn from agency records, they only contain data on 8th graders who were enrolled in Texas public schools when the tracking period began (e.g., Fall Term 1996). In many states, this constraint also applies to subsequent postsecondary enrollments if NSC data are not tapped, but Texas and Florida are among the fortunate states that collect enrollment data on students who enroll in both public and private colleges and universities within their boundaries. Second, although tapping NSC data can powerfully supplement data on postsecondary activity, the coverage of the NSC is incomplete. At more than 93 percent of all enrollments nationwide, NSC coverage overall is very good, but the coverage for some states, while continuing to improve, remains somewhat lacking. Texas, for example, will not have adequate coverage until the 2000 8th grade cohort is tracked, after which NSC records can be confidently used.

### *How Were the Estimates for Additional Out-of-State Credentials Calculated?*

In 2007, NCHEMS used NSC data to create tracking statistics for beginning first-time students in each of the 50 states that could take into account out-of-state credentials. Applying the results of this study to estimate out-of-state credentialing to Texas resulted in an additional 10.4 percent associate and baccalaureate degrees earned six years after freshmen enrolled. Applying this estimate to adjust the overall credentialing rate for the beginning 8th grade cohorts yields a combined credentialing rate of 21.9 percent for Texas, an increase of 2.0 percentage points. The parallel increment in degrees earned in Florida after taking out-of-state activity into account is 12.7 percent. Applying this estimate to the 8th grade credentialing rate yields a combined rate for Florida of 19.4 percent, an increase of 2.2 percentage points.

## APPENDIX B

# Detailed Breakdown of Texas Data by Race/Ethnicity

Combined 1996–98 8th Grade Cohorts Tracked through 11 Years, Headcount

Ethnicity	8th Grade	HE Enrollee	Enrolled in HE, not a HS graduate	HE Credential
Native American	2,208	958	128	312
Asian	21,710	15,780	1,585	8,960
Black	122,642	57,855	6,498	13,962
Hispanic	318,739	130,314	14,434	37,027
White	417,961	258,114	26,210	115,228
<b>Total</b>	<b>883,260</b>	<b>463,021</b>	<b>48,855</b>	<b>175,489</b>

Combined 1996–98 8th Grade Cohorts Tracked through 11 Years, Percentage

Ethnicity	8th Grade	8th Grade	HE Enrollee	Enrolled in HE, not a HS graduate	HE Credential
Native American	2,208	100.0%	43.4%	5.8%	14.1%
Asian	21,710	100.0%	72.7%	7.3%	41.3%
Black	122,642	100.0%	47.2%	5.3%	11.4%
Hispanic	318,739	100.0%	40.9%	4.5%	11.6%
White	417,961	100.0%	61.8%	6.3%	27.6%
<b>Total</b>	<b>883,260</b>	<b>100.0%</b>	<b>52.4%</b>	<b>5.5%</b>	<b>19.9%</b>

*HE: Higher education*

*HS: High school*

## APPENDIX C

# Detailed Breakdown of Texas Data by Race/Ethnicity and Gender

Combined 1996–98 8th Grade Cohorts Tracked through 11 Years, Headcount

Gender	Ethnicity	8th Grade	HE Enrollee	Enrolled in HE, not a HS graduate	HE Credential
Female	Native American	1,093	517	66	181
	Asian	10,566	7,896	734	4,915
	Black	60,160	32,328	3,278	9,127
	Hispanic	154,734	70,494	6,975	22,487
	White	202,638	134,328	12,656	65,844
	<b>Total</b>	<b>429,191</b>	<b>245,563</b>	<b>23,709</b>	<b>102,554</b>
Male	Native American	1,115	441	62	131
	Asian	11,144	7,884	851	4,045
	Black	62,482	25,527	3,220	4,835
	Hispanic	164,005	59,820	7,459	14,540
	White	215,323	123,786	13,554	49,384
	<b>Total</b>	<b>454,069</b>	<b>217,458</b>	<b>25,146</b>	<b>72,935</b>

Combined 1996–98 8th Grade Cohorts Tracked through 11 Years, Percentage

Gender	Ethnicity	8th Grade	8th Grade	HE Enrollee	Enrolled in HE, not a HS graduate	HE Credential
Female	Native American	1,093	100.0%	47.3%	6.0%	16.6%
	Asian	10,566	100.0%	74.7%	6.9%	46.5%
	Black	60,160	100.0%	53.7%	5.4%	15.2%
	Hispanic	154,734	100.0%	45.6%	4.5%	14.5%
	White	202,638	100.0%	66.3%	6.2%	32.5%
	<b>Total</b>	<b>429,191</b>	<b>100.0%</b>	<b>57.2%</b>	<b>5.5%</b>	<b>23.9%</b>
Male	Native American	1,115	100.0%	39.6%	5.6%	11.7%
	Asian	11,144	100.0%	70.7%	7.6%	36.3%
	Black	62,482	100.0%	40.9%	5.2%	7.7%
	Hispanic	164,005	100.0%	36.5%	4.5%	8.9%
	White	215,323	100.0%	57.5%	6.3%	22.9%
	<b>Total</b>	<b>454,069</b>	<b>100.0%</b>	<b>47.9%</b>	<b>5.5%</b>	<b>16.1%</b>

HE: Higher education

HS: High school

## APPENDIX D

# Detailed Breakdown of Florida Data and NELS-88

### Florida

Gender	Ethnicity	8th Grade 1998 Cohort	8th Grade	HE Enrollee	HE Credential
Female	Native American	240	100.0%	40.8%	21.7%
	Asian	1,643	100.0%	63.1%	40.7%
	Black	24,292	100.0%	36.6%	13.3%
	Hispanic	16,343	100.0%	38.7%	17.1%
	White	52,021	100.0%	48.0%	26.3%
	[Multiracial]	339	100.0%	44.0%	20.4%
	<b>Total</b>	<b>94,878</b>	<b>100.0%</b>	<b>43.7%</b>	<b>21.6%</b>
Male	Native American	248	100.0%	34.3%	15.3%
	Asian	1,868	100.0%	54.0%	30.2%
	Black	26,356	100.0%	22.0%	5.6%
	Hispanic	18,174	100.0%	28.4%	9.9%
	White	56,787	100.0%	36.5%	17.4%
	[Multiracial]	347	100.0%	33.4%	13.0%
	<b>Total</b>	<b>103,780</b>	<b>100.0%</b>	<b>31.7%</b>	<b>13.3%</b>
<b>Total for All</b>		<b>198,658</b>	<b>100.0%</b>	<b>37.4%</b>	<b>17.2%</b>

### NELS-88

	8th Grade 1988 Cohort	8th Grade	HE Enrollee	HE Credential
Female		100.0%	78.4%	32.0%
Male		100.0%	73.1%	26.5%
Native American	161	100.0%	67.2%	10.5%
Asian	853	100.0%	94.8%	51.4%
Black	1,176	100.0%	76.5%	17.1%
Hispanic	1,622	100.0%	69.7%	15.1%
White	8,327	100.0%	76.5%	34.2%
<b>Total</b>	<b>12,139</b>	<b>100.0%</b>	<b>75.7%</b>	<b>29.3%</b>

HE: Higher education

HS: High school

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