

September 2007,
rev. November 2007



CENTRAL TEXAS
Student Futures
PROJECT

Education and Work After High School: A First Look at the Class of 2006

A Research Report of the
Central Texas Student Futures Project

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This report was prepared with funds provided to the Ray Marshall Center for the Study of Human Resources at the University of Texas at Austin and Skillpoint Alliance by TG and the Greater Austin Chamber of Commerce. The views expressed here are those of the authors and do not represent the positions of the funding agencies or The University.

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Acknowledgements

Many individuals and agencies shared insights, experiences, knowledge and data that contributed to this report. Researchers at the Ray Marshall Center express their gratitude to everyone who has helped to complete or has contributed to this phase of the project.

Without the financial resources provided by the Greater Austin Chamber of Commerce (GAC) and TG, this phase of the research could not have come to fruition. The authors particularly want to thank Drew Scheberle at GAC for his input and support throughout this project. Thanks also go to Kristin Boyer and Jacob Fraire at TG for their continued interest in the findings from this work.

The project would not have progressed without the enthusiastic contributions of the six participating districts – Austin, Del Valle, Leander, Manor, Pflugerville, and Round Rock. District leaders committing to this project include Pat Forgione of Austin ISD, Bernard Blanchard of Del Valle ISD, Tom Glenn of Leander ISD, Mark Diaz of Manor ISD, Patricia Pickles and Charles Dupree of Pflugerville ISD, and Jesús Chávez of Round Rock ISD. Several district staff members who assisted us with background information and student data deserve special mention, including Holly Williams, Lisa Schmitt and Cathy Malerba of Austin ISD, Onore Valenzuela of Manor ISD, Sandie Lindgren and Camille Clay of Leander ISD, Susan Bell and Debbie Utley of Pflugerville ISD, and Debra Mason of Round Rock ISD. We also appreciate the assistance of numerous other individuals in each school district who supported the 2006 Senior Survey.

The authors thank Nicole Beck from the Ray Marshall Center for her thoughtful comments on earlier drafts. We must also express our thanks to Susie Riley from the Ray Marshall Center, who once again provided her expertise in formatting the report for final publication. Finally, the researchers would like to thank our partners at Skillpoint Alliance – Margo Dover, Jim McClure, and David Wilkinson – for their continued hard work in making this project a reality.

Executive Summary

The U.S. economy has undergone significant transitions in recent years resulting from technological innovations, an increasingly global market and the ongoing restructuring of work, all of which have created an increased demand for well-educated and trained workers. The economy of Central Texas has mirrored these national changes and local demand is greater than ever before for highly skilled workers. The need for far larger numbers of postsecondary students and graduates is occurring simultaneously with rapidly growing Central Texas minority populations who have historically attended college at low rates. Thus, improved policies and practices are called for to enable Central Texas residents to acquire the education needed to meet the region's changing workforce and economic development demands.

Central Texas Student Futures Project

The Central Texas Student Futures Project—formerly known as the Central Texas High School Data Center—is a research partnership of the Ray Marshall Center, Skillpoint Alliance and a growing number of Central Texas independent school districts (ISDs) in Hays, Travis and Williamson counties. The purpose of the Student Futures Project is two-fold:

- To provide Central Texas school districts, postsecondary institutions, and employers with comprehensive, longitudinal research on what local high school students are doing after high school, why they are making these decisions, and how a variety of educational, personal and financial factors are related to their success in higher education and the workforce; and
- To foster best practices through workshops, seminars and applied research, assisting the region's ISDs, Education Service Center and postsecondary institutions to increase the number of regional youth who obtain postsecondary academic and workforce credentials.

This report focuses on youth who were classified as seniors as of October 2005 in the participating school districts. The report addresses the following research questions:

1. What share of seniors enrolled in 2-year and 4-year postsecondary institutions after graduation, as of December 2006?

2. What share of seniors was employed in the fall quarter (October – December 2006) after graduation?
3. What share of seniors was both enrolled in postsecondary education and employed in the fall quarter after graduation?
4. Which factors—family background, demographics, academic performance, high school activities and preparation for college—are significantly and substantially associated with these initial postsecondary education and labor market outcomes?

To answer the research questions, RMC researchers used both descriptive statistics and more sophisticated multivariate techniques to determine the factors associated with postsecondary education and employment outcomes for 2006 Central Texas seniors. The data used for this analysis was constructed from individual student high school records, a survey of Central Texas seniors prior to graduation, and postsecondary education and employment records through December 2006.

Postsecondary Outcomes

Analyzing initial postsecondary enrollments for the Summer and Fall 2006 semesters, researchers found that 42% of 2006 seniors for whom linking information was available (8,295) were enrolled in postsecondary education, based on both in- and out-of-state data from the National Student Clearinghouse and directory information from the University of Texas at Austin. Of these, 60% were attending a 4-year university, while the remaining 40% were attending 2-year colleges. Higher shares of the following groups enrolled in 4-year universities:

- White or Asian
- Not low-income
- Had mothers with at least a bachelor's degree, or
- Did not attend low-income high schools.

Enrollment rates in 2-year colleges were more evenly distributed across all demographic groups.

Postsecondary enrollment patterns for individual high schools within each district except Austin ISD tended to be fairly similar: Pflugerville ISD (41%), Round Rock ISD (40%) and Manor ISD (38%). In Austin ISD, enrollment rates varied widely by high school cluster. Seniors who attended the Anderson/Austin/Bowie high school cluster were far more likely to enroll in further education (60%) than those who attended other high school clusters in the district (43% or fewer).

Due to data limitations, the complete information needed to calculate Texas employment rates for the 4th quarter of 2006 were only available for 4,841 of the 8,295 seniors in the study. Over half of the smaller sample (53%) and 32% of the full sample were employed in Texas in the 4th quarter of 2006 based on Unemployment Insurance wage records. Higher shares of seniors from the following demographic groups were employed than was true for other groups:

- Hispanic or Black
- Low-income
- Had mothers with less than a bachelor's degree
- Came from families who had not previously participated in postsecondary education, or
- Attended low-income high schools

Employment rates by high school tend to be inversely related to college enrollment rates: schools or school clusters with lower enrollment rates had higher employment rates.

In the overall sample, 29% were only enrolled in postsecondary education. Another 13% were both enrolled and employed, while 19% were employed only. Fifteen percent were neither employed nor enrolled and missing data precluded calculating outcomes for another 24% of seniors.

Factors Associated with Postsecondary Outcomes

Through a number of regression models, researchers identified and analyzed factors that were most strongly associated with postsecondary education and employment outcomes. Comparison of the models showed that using a data set that combines both survey and

administrative data improves the explanatory power of the models used. The findings are both instructive and suggestive of actions that may be taken by local school districts.

Initial enrollments in further education by Central Texas youth are related to a number of factors. Major factors positively associated with enrollments in 4-year colleges and universities include a number of specific college preparation activities and participation in sports. Major factors negatively associated with 4-year college enrollments more generally include demographic and family background factors, and thinking about college as an option later in life. The table below indicates factors that are significantly and positively associated with 4-year and 2-year postsecondary enrollments through December 2006. The factors are summarized for all youth in the sample and for two key groups of interest—Hispanic youth and those who would be first-generation college students.

Factors Related to Enrollment in 4-Year Postsecondary Education

	More Likely to Enroll	Less Likely to Enroll
For All Seniors	<ul style="list-style-type: none"> - Ordering and submitting transcripts - Taking college entrance tests - Participating in school-related sports - Mother has at least a bachelor’s degree - Completing and submitting FAFSA - Visiting one or more college campuses 	<ul style="list-style-type: none"> - Weak parental encouragement - Being low-income - Being Hispanic - Completing ACC courses while in high school - Thinking about college as an option since childhood (vs. for “as long as I can remember”)
For Hispanic Seniors	<ul style="list-style-type: none"> - Ordering and submitting transcripts - Participating in sports activities (school, non-school) - Meeting with counselor about 4-year plans - Credit for foreign language in 8th grade - Taking college entrance tests 	<ul style="list-style-type: none"> - Thinking about college as an option since childhood (vs. for “as long as I can remember”)
For First-Generation College Goers	<ul style="list-style-type: none"> - Completing and submitting scholarship applications - Ordering and submitting transcripts - Taking the PSAT exam - Participating in school-related sports 	<ul style="list-style-type: none"> - Weak parental encouragement - Thinking about college as an option in childhood, middle school or high school (vs. for “as long as I can remember”)

The following table summarizes the factors that are associated with being more likely or less likely to enroll in 2-year colleges.

Factors Related to Enrollment in 2-Year Postsecondary Education

	More Likely to Enroll	Less Likely to Enroll
For All Seniors	<ul style="list-style-type: none"> - Taking college entrance tests - Meeting with counselor about financial aid applications - Meeting with counselor about career information - Thinking about college as an option since childhood (vs. for “as long as I can remember”) 	<ul style="list-style-type: none"> - Being unusually old - Being retained in 9th grade - Being low-income - Completing and submitting scholarship applications - Mother has at least a bachelor’s degree - Some (vs. strong) parental encouragement
For Hispanic Seniors	<ul style="list-style-type: none"> - Thinking about college as an option since childhood (vs. for “as long as I can remember”) - Taking college entrance tests - Meeting with counselor about course selection/placement 	<ul style="list-style-type: none"> - Being unusually old - Completing and submitting scholarship applications - Being low-income - Completing ACC courses while in high school - Some (vs. strong) parental encouragement
For First-Generation College Goers	<ul style="list-style-type: none"> - Taking college entrance tests - Working between 6-10 (vs. 16+) hours per week during senior year - Thinking about college as an option since childhood (vs. for “as long as I can remember”) - Meeting with counselor about course selection and placement 	<ul style="list-style-type: none"> - Being unusually old - Being Black - Being low-income - Completing and submitting scholarship applications - Meeting with counselor about personal/family issues - Visiting one or more college campuses

Researchers also examined factors significantly related to employment, whether or not the individual was also simultaneously enrolled in college. In general, factors positively associated with employment were found to be negatively associated with enrollment in postsecondary education.

Conclusions

This report is a *First Look* at the initial postsecondary education and employment outcomes and related factors for 2006 Central Texas high school seniors; future reports will continue to analyze postsecondary outcomes for this cohort. While it is important to acknowledge the data and other limitations affecting the analysis presented in this report, even the initial findings from this research provide valuable information to participating school districts, the larger Central Texas community and the research literature. As the project moves forward and overcomes the limitations cited above, the strength of the findings

and their potential to guide education policy and program decisions in Central Texas will be even greater.

Major conclusions stemming from this first look at initial education and employment outcomes for 2006 seniors are as follows.

1. Research models that link information from individual school and employment administrative records with additional student background information collected in the senior survey perform better than models that rely only on administrative records. Studies that rely solely on administrative data miss important differences both across and within demographic groups and across students that are significantly associated with postsecondary transitions.
2. Education and student background factors are related to overall 2-year and 4-year postsecondary education enrollments in different ways. These factors also work differently for seniors from different socioeconomic, race/ethnic and family backgrounds. For example, 2-year college enrollments by first-generation and Hispanic students were positively affected by thinking about college as an option since childhood (rather than for “as long as I can remember”), while 4-year college enrollments for these youth were negatively affected.
3. Factors most strongly related to employment after high school were different from those that affected college enrollments. For the subset of youth who were just employed in Fall 2006, important factors included having never thought about college as an option after high school and having met with counselors about personal or family problems.
4. Some Central Texas results varied from the existing literature; among these, differences in the results as compared to the literature for race/ethnicity and gender are particularly notable. In the research literature, females are far more likely to attend college than males. In the analyses for Class of 2006 seniors, gender was never found to be statistically significant. Also, race/ethnicity did not play as significant or as certain a role in enrollment or employment as had been suggested in the literature.

Recommendations

These initial findings and conclusions suggest several recommendations for school districts to consider.

1. Schools, districts, and other stakeholders should tailor college preparation programs and policies to meet the needs of specific groups of students.
2. School districts and the community should focus on strategies to create a college-going culture much earlier in students' school careers, particularly focusing on pre-kindergarten and early elementary school.
3. Schools must work harder to involve parents in their efforts to create a college-going culture.
4. High schools need to strengthen counseling, college preparation, and extracurricular activities (particularly sports), all of which play a significant positive role in transitions to college for some segments of their student population.

The conclusions and recommendations in this first report on initial outcomes for 2006 Central Texas seniors are based on all of the seniors in our research sample, regardless of the school or school district they attended. As researchers continue to work with local school districts to overcome data limitations and more employment and postsecondary enrollment data become available over time, it will be possible to develop recommendations for individual school districts.

Chapter I. Project Overview

The U.S. economy has undergone significant transitions in recent years resulting from technological innovations, an increasingly global market and the ongoing restructuring of work, all of which have created an increased demand for well-educated and trained workers. The economy of Central Texas has mirrored these national changes and local demand is greater than ever before for highly skilled workers. The Texas Higher Education Coordinating Board's (THECB) postsecondary education plan, *Closing the Gaps by 2015*, concluded that the Austin region must add 50,000 more college graduates by 2015 in order not to lose its competitive edge to other regions in this country and the world (THECB, 2000). The Greater Austin Chamber's *Draft Plan for 20,010 in 2010* has, among other significant targets, set a goal of increasing the direct-to-college enrollment rate from 48% to 63% by 2010, which translates into an increase of 20,010 postsecondary enrollments over the 2005 baseline in the metro area and over 87,000 high school graduates from Austin enrolled in postsecondary education somewhere in the United States (Greater Austin Chamber, 2007). The need for far larger numbers of postsecondary students and graduates is occurring simultaneously with rapidly growing Central Texas minority populations who have historically attended college at low rates. Thus, improved policies and practices are called for to enable Central Texas residents to acquire the education needed to meet the region's changing workforce and economic development demands.

Central Texas Student Futures Project Overview

The Central Texas Student Futures Project—formerly known as the Central Texas High School Data Center—is a research partnership of the Ray Marshall Center, Skillpoint Alliance and a growing number of Central Texas independent school districts (ISDs). The Student Futures Project has begun to follow the progress of Central Texas seniors as they make the critical transition from high school to postsecondary education, the labor market and the military, as well as less desired outcomes such as welfare and corrections. The purpose of the Student Futures Project is two-fold:

- To provide Central Texas school districts, postsecondary institutions, and employers with comprehensive, longitudinal research on what local high school

students are doing after high school, why they are making these decisions, and how a variety of educational, personal and financial factors are related to their success in higher education and the workforce; and

- To foster best practices through workshops, seminars and applied research, assisting the region's ISDs, Education Service Center and postsecondary institutions to increase the number of regional youth who obtain postsecondary academic and workforce credentials.

As defined in this report, Central Texas comprises Hays, Travis and Williamson counties and includes 22 school districts.¹ Estimates derived from the 2005 American Community Survey (ACS) show that the median household incomes in these counties are \$43,207 (Hays), \$48,026 (Travis), and \$62,418 (Williamson) , respectively. The ACS also shows that 17% of children under 18 in Travis County live in families with incomes below the poverty level, while in Williamson County that number is 7% and in Hays County 10%. Hispanics constitute approximately 32% of the population in Travis and Hays counties and 20% of the Williamson County population. According to the Texas Education Agency (TEA), 229,114 students were enrolled in the three-county area in 2006, including all elementary and secondary schools.

In each year of the study, the Student Futures Project plans to answer the following major research questions for the region's high school students²:

1. Which students are participating in postsecondary education following graduation and why?
2. Which students are going to work following graduation and why?
3. Which students are both working and participating in postsecondary education?

The first two questions constitute the study's primary focus and will be analyzed for Central Texas students as a whole and for key population groups of students. To determine

¹ School districts in other counties may be included in future work.

² This report focuses on youth who were classified as seniors as of October 2005. It was not possible to restrict the analysis to actual graduates due to data limitations in one participating school district. Future reports on these youth will measure outcomes for high school graduates as well as seniors.

both what students plan to do after high school and key influences on these outcomes, the Student Futures Project surveys students in the spring prior to graduation and will begin to survey them again one year following graduation if resources permit. Students' educational and labor force progress will be followed for up to four years after high school graduation, using both survey and administrative data. Statistical analysis of the resulting data will identify those background factors and educational practices that are associated with positive education and labor force outcomes. Findings will be shared annually with business leaders committed to supporting local education initiatives and with local educators for use in improving practices for future cohorts of students.

Key results expected from the Student Futures Project include, among others:

- Better understanding of the factors associated with student postsecondary success by policymakers, community and corporate leaders, and, most importantly, school officials, administrators and parents;
- Improved postsecondary education and labor market outcomes over time; and
- Increased engagement of employers and community leaders in local education.

Four ISDs—Austin, Del Valle, Pflugerville and Round Rock—participated in the Student Futures Project in 2005 as part of the project's first research and dissemination cycle, working with researchers to pilot and test the survey instruments and presentation formats.³ Two additional districts—Leander and Manor—were added to the project in the second cycle from January 2006 through August 2007. A recent report, Schexnayder et al. (2007), presented findings and conclusions based solely on an analysis of 2006 senior survey responses in the six participating districts. An analysis of 2007 senior survey responses will be published in late fall 2007.

Organization of this Report

The current report provides the Student Futures Project's first in-depth analysis of 2006 high school student academic records linked to senior survey data and subsequent

³ See the *Central Texas High School Graduate Data Center Year One Final Report* by Schexnayder et al. (2006), which is available on the RMC web site: www.utexas.edu/research/cshr/.

postsecondary enrollment and labor market records. In preparation for this report, the Student Futures Project conducted the following activities during the 2006 research cycle:

- Surveyed 2006 high school seniors in the six participating school districts prior to their graduation and analyzed results from those surveys;
- Obtained historical student records from the school districts and initial postsecondary enrollment and workforce participation data through December 2006 from agencies that collect these data;
- Combined student-level survey data with data from these administrative sources to create the first comprehensive research data set for Central Texas that can be used for longitudinal analysis; and
- Developed initial statistical models to determine which background and school variables are related to students' initial enrollment in postsecondary education and/or employment through the fall semester after graduation.

Chapter II outlines the specific research questions driving this analysis of initial postsecondary outcomes for 2006 Central Texas high school seniors and summarizes the methods and data sources used in the analysis. Chapter III presents and discusses findings from the descriptive analysis of initial postsecondary education and labor market outcomes. Chapter IV discusses results from the multivariate analysis of factors related to initial enrollment in postsecondary education and employment. Chapter V summarizes the results from all facets of this work, offers conclusions and recommendations stemming from this initial look at postsecondary outcomes for Class of 2006 seniors, and outlines plans for future Student Futures Project work. Two appendices complete the report. Appendix A is a technical description of the data sets. Appendix B provides detailed regression results.

Chapter II. Research Questions, Methods and Data

Research Questions

This report addresses the following research questions about 2006 seniors in Central Texas school districts that are participating in the Student Futures Project's research:

1. What share of seniors enrolled in 2-year and 4-year postsecondary institutions after graduation, as of December 2006?
2. What share of seniors was employed in the fall quarter (October – December 2006) after graduation?
3. What share of seniors was both enrolled in postsecondary education and employed in the fall quarter after graduation?
4. Which factors—family background, demographics, academic performance, high school activities and preparation for college—are significantly and substantially associated with these initial postsecondary education and labor market outcomes?

This is the first of four annual outcomes reports for 2006 Central Texas seniors. The research questions to be addressed in future reports will become more complex as additional postsecondary education and employment data become available.

Research Methods

To answer the research questions, researchers used both descriptive statistics and more sophisticated multivariate techniques to analyze research data constructed from individual student high school records, data from a survey of Central Texas seniors prior to graduation, and postsecondary education and employment records through December 2006. The data sets are described briefly below and discussed in more detail in Appendix A.

Descriptive Statistics. The first three research questions were analyzed simply by computing the numbers and shares of those students in the research samples who enrolled in postsecondary education in Texas and other states, were employed in Texas, or did both by December 2006. The report also summarizes initial enrollment and employment rates by major demographic group, high school and district.

Multivariate Analysis. In the process of analyzing the data to answer the fourth research question, researchers utilized and tested several regression models, including standard Ordinary Least Squares (OLS), OLS using robust variance estimators, OLS using robust variance estimators while clustering by high school, robust regression, and logistic regression models. The multivariate analyses in Chapter IV are all based on OLS regressions with robust variances. Robust variances are more conservative than standard estimates, accounting more effectively for data anomalies. The choice of OLS regression over logistic regression offers the advantage of allowing the coefficient estimates of the explanatory variables to be interpreted as marginal probabilities that a youth will attend college or work.

Given the large number of variables included in the regression analyses, researchers examined the variance inflation factor (VIF) of the models. Whenever VIF of any single variable is over 10, or if the mean of the VIF is much greater than 1, then multicollinearity may be affecting the results of the analysis and, hence, needs to be considered when discussing results.⁴ As neither of these conditions was present for any of the variables in the models, the issue of multicollinearity does not require discussion in this report.

Construction and Description of Research Data Sets

The research design for this project assumed that historical high school student records (consisting of student demographic characteristics, courses taken and course grades) would be obtained for all 2006 seniors in the six participating districts, and that these records would be linked to postsecondary enrollment and employment data through December 2006 to measure initial student outcomes. For the more sophisticated multivariate analyses, researchers planned to use this data set combined with additional variables from the senior survey to include information not measured by official school records in the set of factors associated with future postsecondary enrollment. Finally, researchers expected to use statistical weights to account for student non-response to the senior survey. Using complete historical high school records linked to enrollment and employment data and to weighted

⁴ Chatterjee, S., A. S. Hadi, and B. Price. (2000). *Regression Analysis by Example*. 3rd ed. New York: Wiley Interscience.

student responses, researchers' descriptions, analyses, and conclusions would have applied to the entire class of 2006 from the six participating districts.

Data Sources. Table 1 lists the data sources used to construct the research data sets described in this report and briefly describes the characteristics of each source.

Table 1. Sources of Data Used to Construct Research Data Sets

Type of Data	Source	Description
Historical High School Records	Austin ISD	Linked data file containing demographic and academic information from grades 9-12 for all 2006 seniors; some variable restrictions for students who did not provide direct consent
	Manor	Demographic information for all 2006 seniors
	Leander	Demographic and academic records from grades 9-12 for 2006 seniors who provided direct consent
	Pflugerville	Demographic and academic records from grades 9-12 for all 2006 seniors
	Round Rock	Demographic and academic records from grades 9-12 for all 2006 seniors
Senior Exit Survey	Austin ISD Senior Survey	Linked data file containing results from Austin ISD survey for all students who took the survey
	Central Texas Senior Survey	Survey data for Manor, Leander, Pflugerville and Round Rock 2006 seniors who completed survey prior to graduation
Postsecondary Education Enrollment	Austin ISD file	Linked data file indicating enrollment in 2-year or 4-year colleges based on AISD's acquisition of National Student Clearinghouse data
	National Student Clearinghouse	Directory information for students enrolled in postsecondary education through December 2006 at colleges throughout the U.S. for non-AISD seniors
	University of Texas Registrar	Directory information for students enrolled at the University of Texas at Austin through December 2006 (UT is not included in NSC database)
Employment	Texas Workforce Commission	Unemployment Insurance quarterly wage records for employment within Texas for the 4 th calendar quarter of 2006

Sample sizes. In this initial year of collecting student records, it was not possible to obtain student information for all 9,193 seniors in the six participating districts in a form suitable for linking to both postsecondary enrollment and employment records. Because a number of different research samples are used in this report for the outcomes and regression analyses, the descriptions, analyses and conclusions in this report are based on the

individuals in each sample rather than all Class of 2006 seniors from the six participating school districts (Table 2). In general, each sample includes the maximum number of student records that could be linked to the other data sources available. The sizes of the various research samples are listed below and their composition is detailed briefly prior to their analysis and discussion. Additional information, including specific issues with the data provided by individual school districts, is provided in Appendix A.

Table 2. Sizes of Study Samples in this Report

	Postsecondary Enrollment	Employment
Descriptive Analyses	Descriptive Sample 1 (DS 1)	Descriptive Sample 2 (DS 2)
Sample size	8,295 seniors	4,841 seniors
Regression Analyses	Regression Sample 1 (RS 1)	Regression Sample 3 (RS 3)
<u>Models using only school records</u>		
Sample size	7,393 seniors	4,206 seniors
	Regression Sample 2 (RS 2)	Regression Sample 4 (RS 4)
<u>Models using school records linked to survey data:</u>		
Sample size	3,800 seniors	1,639 seniors

Characteristics of 2006 Seniors. Five of the school districts in the study provided researchers with individual school records for 2006 seniors.⁵ The demographic characteristics for seniors in this research sample (DS 1) are detailed in Table 3. Of the 8,295 seniors in the sample, almost half were White. Hispanic youth account for the next largest group at 32%. Seniors were evenly split between genders. Seniors from low-income families made up about 29% of the sample, and 18% of seniors would be the first generation in their family to attend college or some other form of postsecondary education.

⁵ Del Valle ISD did not provide student records. Leander ISD only provided student records for those students giving direct consent.

Characteristics of the other research samples discussed in this report are included in Appendix A.

Table 3. Characteristics of 2006 Central Texas Seniors¹

Total	Number	Percent
	8,295	100%
Ethnicity		
Black	1,140	14%
Asian or Pacific Islander	455	5%
Hispanic, Latino, of Spanish Origin	2,625	32%
White or Caucasian	4,052	49%
Gender		
Female	4,182	50%
Male	4,113	50%
Family Income Status		
Low-income	2,413	29%
Not low-income	5,730	69%
Unknown	152	2%
Mother's Education Level		
Below a bachelor's	3,072	37%
Bachelor's degree or above	1,445	17%
Unknown	3,778	46%
First Generation²		
Yes	1,501	18%
No	3,016	36%
Unknown	3,778	46%

¹ Includes information for all 2006 seniors in Austin, Manor, Pflugerville and Round Rock ISDs and seniors who provided consent in Leander ISD

² Based only on mother's education for Austin ISD respondents but on both parents' education in the other ISDs.

Expected Effect of Variables Contained in Data Sets. The variables examined in the analyses fall into several broad categories: demographics, secondary coursework, family background, extracurricular activities, counselor interactions, college preparation activities, perceptions of high school preparation, and high school attended in a student's senior year. The specific variables in each category are presented and defined in Appendix A, along with

the researchers' expectations for their likely effects on initial postsecondary enrollment and employment. Expectations are largely based on findings in the research literature; details on the literature reviewed for this project are presented in *Central Texas High School Graduate Data Center: Year One Final Report* (Schexnayder et al., 2006).

In terms of overall expectations, variables expected to have a positive effect on postsecondary education enrollment were expected to have a negative effect on employment and vice versa. The following demographic variables were expected to have a negative effect on enrollment: race, if not White; age, if outside normal range for high school seniors; male gender; and being low-income. Coursework variables indicating the number of high school credit hours in math and Advanced Placement/International Baccalaureate (AP/IB) courses, and high school credits earned in middle school, were expected to have a positive effect on enrollment, while being retained in 9th grade was expected to have a negative effect on further schooling. Additionally, most variables concerning student counselor interactions and all college preparation activities were expected to have a positive effect on enrollment. Family background variables, except for first-generation status, were also expected to positively affect postsecondary enrollments. Finally, routine care of family members, poor study habits, and working long hours for pay during high school were expected to have a negative effect on enrollment, while all other extracurricular activities were expected to have a positive effect.

Data Limitations and Interpretations

The primary limitations of this study stem from the incomplete provision of student records from participating school districts, small survey response rates in some high schools, the inability to differentiate all seniors from actual graduates for one school district, and the length of time needed to obtain postsecondary education records for in-state students. Because of these conditions, it was not possible to assemble the complete data set envisioned for this project within the time period allotted for producing a final report. These limitations necessitated the use of multiple research samples rather than one unified sample that could be

used for multiple purposes. Because of this, it was not possible to incorporate statistical weights to account for non-survey respondents as originally planned.

Additional data limitations involve the data used to measure student outcomes. Postsecondary enrollment is limited to those organizations participating in the National Student Clearinghouse (NSC) plus directory information obtained from the University of Texas at Austin (UT)⁶. Employment is limited to Texas employment as measured by the Texas Workforce Commission's Unemployment Insurance (UI) quarterly wage records.

Many of these data issues have been resolved for the Class of 2007 and researchers are working to resolve remaining issues with participating school districts. The use of statistical weights has been postponed until next year's report. In the meantime, findings and interpretations relate to specific research samples and may not be generalizable to the universe of 2006 Central Texas seniors.

⁶ UT is by far the largest postsecondary institution in Texas not participating in NSC. Others include the University of North Texas and South Texas College; a complete list is provided in Appendix A.

Chapter III. Initial Postsecondary Outcomes for 2006 High School Seniors

This chapter discusses initial postsecondary outcomes for 2006 Central Texas seniors, both overall and for major subgroups. It begins with a discussion of which students are enrolled in postsecondary education, and then examines which are working and, finally, which are both enrolled in postsecondary education and working.

Initial Postsecondary Enrollment

Enrollment outcomes are for all seniors from Austin,⁷ Manor, Pflugerville, and Round Rock ISDs as well as students who provided their consent from Leander who make up Descriptive Sample (DS) 1. Overall, 42% (3,488 students) of the sample of 8,295 seniors in DS 1 were enrolled in postsecondary education between graduation and December 21, 2006, the date of the most recent postsecondary enrollment data obtained from NSC and UT.⁸ It is important to note that reported enrollment rates for *graduates* are expected to be higher, since returning seniors and others would be removed from the calculations.

Table 4 provides information on the initial postsecondary educational enrollment status of the 2006 high school seniors in DS 1 by various demographic and other characteristics. Of those enrolled in postsecondary education, 40% were enrolled in 2-year colleges, and 60% were enrolled in 4-year colleges. In terms of race and ethnicity, Asian/Pacific Islander and White youth in the sample enrolled in postsecondary education at higher rates, with overall rates of 49% and 48% respectively. Hispanic youth had the lowest overall postsecondary enrollment rates and were much less likely to enroll in 4-year institutions than seniors from other groups.

Income appears to be an important line of demarcation, both in terms of family income and the income status of the school attended. Low-income youth and those who attended low-income high schools enrolled in postsecondary education at lower rates than other seniors (30% and 32%, respectively), and the differences were more pronounced for enrollment rates in 4-year colleges and universities.

⁷ Austin ISD postsecondary enrollment information was provided by their Department of Program Evaluation and includes only NSC data for those students who actually graduated. Students who did not graduate were considered “not enrolled” in postsecondary education.

⁸ These sources underestimate enrollment in Texas colleges but allow measurement of out-of-state enrollment.

As noted in the literature (e.g., Choy, 2002), mother’s education appears to play an important role in influencing college-going behavior. Youth whose mother had at least a bachelor’s degree enrolled in postsecondary education at higher rates than those whose mother had completed less education (58% v. 43%), with most of the difference being related to enrollment in 4-year colleges.

Choy’s research also has indicated that postsecondary enrollment rates for youth who would be the first generation in their family to attend college are significantly lower than for students whose parents and/or grandparents attended college. This relationship is evident for the Central Texas sample as well. Youth who would be first-generation students enrolled in postsecondary education at lower rates than students who were not first-generation (38% v. 53%), and most of the difference was accounted for by 4-year enrollments. Finally, gender differences in postsecondary enrollment for 2006 Central Texas seniors were quite small, a noteworthy difference from national studies (e.g., Choy, 2001).

Table 4. Postsecondary Enrollment Rates by Selected Characteristics

Total	Number	Percent Found Enrolled	Percent Enrolled in 2-Year	Percent Enrolled in 4-Year
	8,295	42%	17%	25%
Race/Ethnicity				
Black	1,140	37%	14%	23%
Asian or Pacific Islander	455	49%	18%	32%
Hispanic, Latino, of Spanish Origin	2,625	33%	16%	18%
White or Caucasian	4,052	48%	18%	30%
Gender				
Female	4,182	42%	16%	26%
Male	4,113	41%	17%	24%
Family Income Status				
Low-income	2,413	30%	14%	16%
Not low-income	5,730	47%	18%	29%
Unknown	152			
Mother's Education Level				
Below a bachelor's	3,072	43%	20%	23%
Bachelor's degree or above	1,445	58%	16%	42%
Unknown	3,778			
First Generation¹				
Yes	1,501	38%	18%	20%
No	3,016	53%	19%	34%
Unknown	3,778			
School Income Status				
Low-income	2,338	32%	15%	17%
Not low-income	5,957	46%	17%	29%

¹ Based only on mother’s education for Austin ISD respondents but on both parent’s education in the other ISDs.

As shown in Table 5, inter-district variations in postsecondary enrollment rates—overall, 2-year and 4-year—were modest, ranging from 38-42%. Intra-district variations by high school campus were also modest in Pflugerville and Round Rock ISDs. However, there were large intra-district variations by high school “cluster” in Austin ISD.⁹ Postsecondary enrollment rates for the Anderson/Austin/Bowie cluster were the highest for both 2-year (22%) and 4-year (38%) college enrollments, while enrollment rates for the Johnston/Reagan/Travis cluster were far lower than for the other clusters. The Akins/Crockett/Lanier high school cluster was the only one in which the 2-year enrollment rate exceeded the 4-year rate (18% v. 15%). These inter- and intra-district enrollment variations likely reflect some of the student and school factors discussed above. In Manor ISD, which has a single high school, the 2- and 4-year enrollment rates were almost the same (18% and 20%, respectively), but the 4-year college enrollment rate was the lowest of any of the participating districts. Since Leander ISD did not provide data on all seniors, they are not included in the table below.

Table 5. Enrollment Rates by Participating Schools and Districts

District	Total Seniors in Data set	Percent Enrolled	Percent Enrolled in 2-Year	Percent Enrolled in 4-Year
Austin ISD¹	4,330	42%	17%	25%
Akins/Crockett/Lanier	1,208	33%	18%	15%
Anderson/Austin/Bowie	1,526	60%	22%	38%
Garza/LBJ/McCallum	886	43%	16%	27%
Johnston/Reagan/Travis	710	18%	8%	10%
Leander ISD²	488			
Cedar Park HS	240			
Leander HS	246			
Manor ISD, HS	132	38%	18%	20%
Pflugerville ISD	1,091	41%	15%	26%
Hendrickson HS	208	42%	16%	26%
Connally HS	338	44%	16%	28%
Pflugerville HS	454	40%	14%	26%
Round Rock ISD	2,253	40%	15%	25%
McNeil HS	558	42%	16%	26%
Round Rock HS	420	43%	16%	27%
Stony Point HS	665	35%	14%	21%
Westwood HS	537	42%	17%	25%

¹ Austin ISD’s schools are clustered per the AISD/RMC data sharing agreement.

² Leander ISD includes only directly consenting students; therefore, enrollment rates could not be determined.

⁹ Austin ISD’s schools are clustered per the AISD/RMC data sharing agreement. High schools that are similar in terms of race/ethnicity and income status are clustered together.

Initial Postsecondary Employment in Texas

Texas employment outcomes were measured for all students from Manor, Pflugerville, and Round Rock, and consenting students in Austin and Leander, for whom Social Security Numbers (SSNs) were available (Descriptive Sample 2). Of the 4,841 Central Texas youth in DS 2, 53% were employed in Texas during the last calendar quarter of 2006 according to Texas Workforce Commission UI wage records (This equals 32% of all seniors in the full sample, DS 1.)¹⁰ Table 6 presents information on employment status, overall and by selected characteristics and subgroups.

The figures shown in the table are largely consistent with researchers' expectations and the patterns of postsecondary enrollment discussed above. In the fall quarter after leaving high school, employment rates tend to be noticeably higher for Central Texas youth who are Hispanic or Black (64% and 57%, respectively), those who come from a low-income family (58%) or low-income high school (59%), those whose mother had less than a bachelor's degree (60%) and those who would be the first-generation in their family to attend college (64%). The data did not reflect any real difference in employment status by gender.

¹⁰ Limitations regarding both UI wage records (e.g., Texas-only) and student administrative records (e.g., missing or limited SSNs) mean that employment status could not be determined for as many youth as were included in the postsecondary enrollment analysis. The employment rates are thus likely to underestimate total postsecondary employment for Class of 2006 seniors.

**Table 6. Employment Rates by Selected Characteristics
for 2006 Central Texas Seniors**

Total	Number	Percent Employed in 4th Quarter 2006
	4,841	53%
Ethnicity		
Black	706	57%
Asian or Pacific Islander	316	36%
Hispanic, Latino, of Spanish Origin	1,181	64%
White or Caucasian	2,629	50%
Gender		
Female	2,479	54%
Male	2,362	53%
Family Income Status		
Low-income	1,126	58%
Not low-income	3,571	51%
Unknown	144	
Mother's Education Level		
Below a bachelor's	1,462	60%
Bachelor's degree or above	684	41%
Unknown	2695	
First Generation¹		
Yes	630	64%
No	1,516	50%
Unknown	2,695	
School Income Status		
Low-income	861	59%
Not low-income	3,980	46%

¹ Based only on mother's education for Austin ISD respondents.

Employment rates for Central Texas seniors by ISD and high school campus or “cluster” are presented in Table 7. As expected, the initial employment results are inversely related to the postsecondary enrollment pattern presented in Table 5: employment rates generally tend to be higher in districts and schools with lower rates of postsecondary education enrollment. After high school, youth are very likely to be working if they are not going to school, and, as shown in the next section, many of those who are going to school are working as well.

Table 7. Employment Rates by Participating Schools and Districts

District	Total Seniors in Data set	Percent Employed in 4 th Quarter 2006
	4,841	53%
Austin ISD^{1,2}	1,260	53%
Akins/Crockett/Lanier	387	67%
Anderson/Austin/Bowie	465	44%
Garza/LBJ/McCallum	241	44%
Johnston/Reagan/Travis	167	57%
Leander ISD²	466	53%
Cedar Park HS	230	48%
Leander HS	234	59%
Manor ISD, HS	119	61%
Pflugerville ISD	1,042	57%
Hendrickson HS	200	55%
Connally HS	316	57%
Pflugerville HS	442	55%
Round Rock ISD	1954	51%
McNeil HS	474	54%
Round Rock HS	373	50%
Stony Point HS	581	61%
Westwood HS	465	36%

¹ Austin ISD's schools are clustered per the AISD/RMC data sharing agreement.

² Employment could only be calculated for those students who provided direct consent.

Employment and Enrollment Activities

One of the key Student Futures Project research questions involves examining which Central Texas youth are both employed *and* enrolled in postsecondary education after high school. The post-high school profile for all 2006 seniors in this study (N=8,295) is shown in Figure 1.

In the overall sample, 29% were only enrolled in postsecondary education. Another 13% were both enrolled and employed, while 19% were employed only. Fifteen percent were neither employed nor enrolled and missing data precluded calculating outcomes for another 24% of seniors.

Figure 1. Postsecondary Outcomes for the Senior Class of 2006

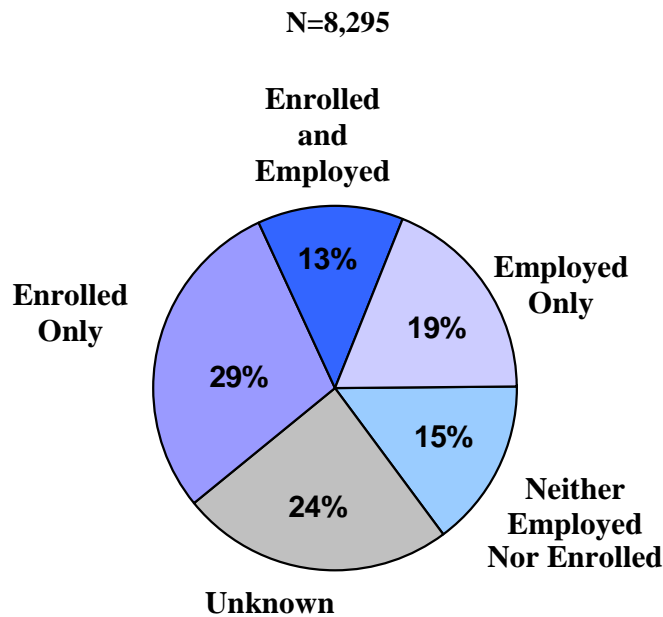


Table 8 includes the distribution of postsecondary education and work among seniors for whom linking data were available to compute outcomes (N=4,841.) Of that group, a plurality of youth (32%) opted to work without enrolling in postsecondary education. Exceptions to this include Asian youth, who were equally likely to be solely enrolled or neither enrolled nor employed (32%); youth whose mother had at least a bachelor's degree, who were most likely to be found solely enrolled in education (35%); and those whose parents had previously attended some postsecondary education, who were slightly more likely to be only enrolled (28%). Hispanic and Black youth were much less likely to be solely enrolled in education (15% and 17% respectively) than White and Asian youth (23% and 32% respectively). Income status, both family and school-level, was also related to student outcomes. Youth from low-income families were more likely to be solely employed (39%) as were those who attended a low-income high school (38%) than youth who were not low-income (29%) or who did not attend low-income high schools (30%). Just over a quarter of youth in the sample could not be found in either national postsecondary enrollment or Texas employment records.

Table 8. Initial Education and Employment Outcomes by Selected Characteristics for 2006 Central Texas Seniors¹

Total	Enrolled and Employed	Enrolled Only	Employed Only	Not Found Employed or Enrolled
N=4,841	22%	21%	32%	26%
Race/Ethnicity				
Black	19%	17%	38%	26%
Asian or Pacific Islander	18%	32%	18%	32%
Hispanic, Latino, of Spanish Origin	24%	15%	40%	21%
White or Caucasian	22%	23%	28%	27%
Gender				
Female	22%	21%	32%	25%
Male	21%	21%	32%	26%
Family Income Status				
Low-income	19%	18%	39%	24%
Not low-income	22%	22%	29%	26%
Mother's Education Level				
Below a bachelor's	23%	19%	36%	21%
Bachelor's degree or above	22%	35%	19%	24%
First Generation				
Yes	23%	15%	41%	20%
No	23%	28%	27%	22%
School Income Status				
Low-income	20%	21%	38%	21%
Not low-income	22%	21%	30%	27%

¹ Percentages in this table are based on the data presented in Table 6.

Summary

Analyzing initial postsecondary enrollments for the Summer and Fall 2006 semesters, researchers found that 42% of 2006 seniors for whom linking information was available (8,295) were enrolled in postsecondary education, based on both in- and out-of-state data from the National Student Clearinghouse and directory information from the University of Texas at Austin. Of these, 60% were attending a 4-year university, while the remaining 40% were attending 2-year colleges. Higher shares of the following groups enrolled in 4-year universities:

- White or Asian
- Not low-income
- Had mothers with at least a bachelor's degree, or
- Did not attend low-income high schools.

Enrollment rates in 2-year colleges were evenly distributed across all demographic groups.

Postsecondary enrollment patterns for individual high schools within each district except Austin ISD tended to be fairly similar: Pflugerville ISD (41%), Round Rock ISD (40%) and Manor ISD (38%). In Austin ISD, enrollment rates varied widely by high school cluster. Seniors who attended the Anderson/Austin/Bowie high school cluster were far more likely to enroll in further education (60%) than those who attended other high school clusters in the district (43% or fewer).

Due to data limitations, the complete information needed to calculate Texas employment rates for the 4th quarter of 2006 were only available for 4,841 of the 8,295 seniors in the study. Over half of the smaller sample (53%) and 32% of the full sample were employed in Texas in the 4th quarter of 2006 based on Unemployment Insurance wage records. Higher shares of seniors from the following demographic groups were employed than was true for other groups:

- Hispanic or Black
- Low-income
- Had mothers with less than a bachelor's degree
- Came from families who had not previously participated in postsecondary education, or
- Attended low-income high schools.

Employment rates by high school tend to be inversely related to college enrollment rates: schools or school clusters with lower enrollment rates had higher employment rates.

In the overall sample, 29% were only enrolled in postsecondary education. Another 13% were both enrolled and employed, while 19% were employed only. Fifteen percent were neither employed nor enrolled and missing data precluded calculating outcomes for another 24% of seniors.

Chapter IV. Multivariate Analysis of Factors Associated with Postsecondary Education and Work

In addition to examining senior's transitions to postsecondary education and work presented in Chapter III, researchers analyzed the factors associated with these transitions through a series of multivariate ordinary least squares (OLS) regressions based on prior student school records, senior survey data, and subsequent postsecondary education and employment records. The dependent variable in all the regressions considered here is binary, taking on the value of one if a student attends a 2-year college, attends a 4-year college, or joins the workforce and a value of zero otherwise. As described in the methods section and Appendix A, the number of 2006 seniors included in each of these regressions varied. Therefore, multiple research samples are used in the following analyses. Tables describing the composition of each regression sample by school district are provided at the beginning of both the enrollment and employment sections in this chapter.

Postsecondary Education

While there were 9,193 seniors in the six participating ISDs, relatively complete school records (9th through 12th grade) could only be linked to enrollment outcomes for 7,393 of these students in four districts as a result of consent issues, invalid identifiers, or district data processing capacity. Table 9 shows the progression from the total population of 2006 seniors, overall and in each ISD, to the education regression samples. Regressions were run on initial postsecondary education outcomes for two samples, one using the administrative school records available for the 7,393 students in Regression Sample 1 (RS 1) and three different models for the 3,800 students for whom both survey and school records were available (RS 2). Enrollment regressions include all students in Austin, Pflugerville, and Round Rock for whom complete data are available, and those students in Leander who provided their direct consent (RS 1 and 2).

Table 9. 2006 Seniors in the Population, in School Records, and in Education Regressions, Overall and by School District

School District	Total 2006 Senior Population	Total Number in Postsecondary Education Regressions	
		School Records (RS 1)	School Records plus Survey Data ¹ (RS 2)
Austin	4,330	4,157	3,288
Del Valle	251	0 ²	0
Leander	1,135	240 ³	186
Manor	132	0 ⁴	0
Pflugerville	1,091	866	133
Round Rock	2,253	2,130	193
Total	9,193	7,393	3,800

¹ These include all students with complete school record and survey data, including variables needed to link records across all data sources.

² School records were not provided for seniors from the class of 2006.

³ School records were only provided for consenters.

⁴ Information on coursework was not provided.

Comparison of Multivariate Models Used to Measure Postsecondary Enrollment

For the preliminary regressions, researchers used basic ordinary least squares (OLS) regression to examine models explaining enrollment in postsecondary education. In the first model, researchers examined limited administrative data from the universe of school records (RS 1) as a baseline for comparison with subsequent models based on the survey sample. Three different regression models were run using the smaller sample for which both school records and survey data were available (RS 2). The first included only the administrative data variables constructed from the school records to account for differences between the make-up of the two samples. The other two models included administrative data variables from school records linked to the full set of survey data for each student. One model does

not account for differences across school districts or high schools, while the last model adds school or district variables to account for where seniors attended school.

Exploratory regressions examining any postsecondary enrollment produced minimal effects and illogical directions in a number of estimations. To correct this, researchers examined enrollments in 2-year and 4-year institutions as separate outcomes. These regression results showed significant effects and divergent estimates between the two outcomes, as detailed later in this chapter.

The statistically significant results of the initial analysis of 4-year enrollments are presented in Table 10. The close agreement of coefficient estimates in the first two columns of the table provides a positive indication of the degree to which survey respondents/consenters were representative of the universe of Central Texas high school seniors graduating in 2006. In all cases, the difference in estimated effects on enrollment in 4-year colleges is less than 0.05; the only difference in the direction of effect is estimated for total high school math credits (a statistically insignificant -0.005 for the universe, compared to a significantly positive 0.036 for the survey sample). This variable, however, has a statistically non-significant effect once school district variables are accounted for (column 4), suggesting that the apparent discrepancy may be attributable to structural differences across ISDs. Note that the high school/district estimates should be interpreted in comparison to a cluster of AISD high schools (Garza/LBJ/McCallum), which was excluded from the analysis. Other variables excluded from the regression analyses are detailed in Table 11.

Table 10. A Comparison of Statistical Models Used to Measure Enrollment in 4-Year Colleges

		RS 1	RS 2		
		School Records (SR)	SR	SR plus Survey Data (SD)	SR, SD, plus School Groups
Model Information	Number of individuals in model	7393	3800	3800	3800
	Model intercept	.262 **	.185 **	.050	.091 *
	R-squared	.064	.127	.222	.235
	Akaike Information Criterion ¹		4405	4081	4033
Category	Variable Description				
Demographics	Hispanic	-.077 **	-.114 **	-.055 **	-.043 *
	Unusually old	-.091 **	-.121 **	-.058	-.065 *
	Gender (1=Male)	-.007	-.034 *	-.012	-.016
	Low income	-.072 **	-.102 **	-.062 **	-.042 *
Coursework	High school credit foreign language in 8th grade	.070 **	.066 **	.034 *	.028
	Total high school math credits	-.005	.036 **	.026 **	.015
	Total high school AP and/or IB credits	.028 **	.035 **	.010	.007
Family Background	Mother completed at least a bachelor's			.056 **	.036
	Parents encouraged postsecondary education somewhat			-.036 *	-.031
	Parents encouraged postsecondary education not very much			-.084 **	-.078 *
	Student first thought about college as an option as a child			-.052 *	-.052 *
Extra-Curricular Activities	School-related sports			.068 **	.071 **
	Non-school-related sports			.042 *	.034 *
	Worked 1-5 hours per week during senior year			.046 *	.035
College Preparation Activities	Visited one or more college campus(es)			.050 **	.052 **
	Completed Recommended High School Program			.036 *	.045 **
	Completed and submitted a FAFSA			.053 **	.058 **
	Took college entrance tests			.080 **	.074 **
	Completed ACC courses while in high school			-.052 **	-.048 **
	Ordered and submitted a transcript to a postsecondary institution			.111 **	.099 **
Preparation	Felt high school prepared very well or well for college and career goals			-.030 *	-.017
High School Group/District of Attendance Senior Year	Austin ISD (Johnston/Reagan/Travis)				-.055 *
	Austin ISD (Akins/Crockett/Lanier)				-.048 *
	Austin ISD (Anderson/Austin/Bowie)				.071 **
	Round Rock ISD				-.100 *
	Leander ISD				-.104 *

* Confidence level greater than 95%, ** Confidence level greater than 99%

Notes: 1) The Akaike Information Criterion was not calculated for the first model since it is estimated over the universe of data.

2) Darker shading indicates variables were not included in the regression.

3) See Table B-2 for complete regression results

The results presented in Table 10 suggest several important points. First, conducting transitions analysis based solely on school administrative records necessarily tells an incomplete and somewhat misleading story about the factors associated with postsecondary education transitions. Second, adding survey and even basic school-setting variables to the data set increases both understanding of these factors and the overall explanatory power or “goodness-of-fit” of the resulting regressions. Third, adding survey and school variables to the data set also begins to point more directly to possible policy and program actions. Companion regression results for initial 2-year postsecondary enrollments, provided in Appendix B, support similar conclusions. These initial explorations also demonstrate that some variables cited in the literature as affecting postsecondary outcomes may have been due to the absence of sufficient explanatory variables. For example, in the preliminary regressions without survey data, gender was found to be a statistically significant predictor of enrollment in 4-year colleges or universities. However, when survey data were included for this same group of individuals, gender was no longer statistically significant. Gender appears to have been carrying the weight of other variables not captured in the administrative data.

Looking more closely at the details, a number of key points emerge from the results contained in Table 10. First, several factors that are both strong and highly significant in the regressions based solely on administrative records (whether for all students or the subset of survey respondents) lose both strength and significance when combined with survey data and the set of district and school variables. For example, being Hispanic is highly significant and has a strong negative effect (-0.114) on 4-year enrollments with administrative records only, but becomes marginally significant and much weaker (-0.043) using the full data set including administrative and survey data with district and school variables. The same holds true for being a much older student and being low-income.

It is also clear that the explanatory power and “fit” of the models increases markedly as researchers add survey information to administrative school records for the same students and increases further when district and/or school variables are added. The R^2 increases from 0.127 for the model based on administrative data for survey respondents only, and jumps to 0.235 for the final regression based on the combined survey and administrative data

including district and/or school variables.¹¹ Similarly, explanatory power as measured by the Akaike Information Criterion improves markedly with the addition of survey data to school records, decreasing from 4,405 to 4,081, and improves somewhat more, to 4,033, when the district and/or school variables are added to the model.¹²

There is some concern that including only broad district and/or school variables (e.g., RRISD, AISD (Johnston/Travis/Reagan)) without additional information on the real nature of the setting in question may unintentionally “mask” the effects of some other important factors not included in the regression models. These school and district variables probably represent a number of different conditions—including high concentrations of students with particular demographic traits (e.g., race/ethnicity, low-income)—as well as differences in school- and district-level policies and programs.¹³ Thus, in the enrollment discussions that follow, regression results are reported for the model based on the combined data set of survey and administrative records (RS 2) that omits district and/or school variables.

Finally, many of the variables based on survey responses are not only statistically significant and strong, but actionable as well. Examples include positive 4-year enrollment effects associated with participation in sports (in and out of school) and college preparation activities (e.g., visiting one or more college campus, completing and submitting the FAFSA, taking college entrance tests, ordering and submitting transcripts).

Factors Associated with Postsecondary Enrollment

In this section, the following results are presented and discussed: 1) analyses of factors related to initial enrollment in 4-year or 2-year postsecondary education for all students; 2) analyses of the role of race/ethnicity in initial college enrollments; and 3) analyses of the role of first-generation student status in initial college enrollments. The

¹¹ The R^2 measure of goodness of fit suffers from technical shortcomings in OLS regression when the dependent variable is restricted to zero or one, as it is here. It remains, however, an acceptable measure of explained variation when comparing relative explanatory power across models.

¹² For more on the Akaike Information Criterion, see Akaike (1973). “Information theory and an extension of the maximum likelihood principle,” In *Second International Symposium on Information Theory*, ed. B. N. Petrov and F. Csaki, 267-281. Budapest: Akailseoniai-Kiudo.

¹³ In future years, the models will be expanded to include detailed school-setting variables to better measure and reflect true school and district variation.

discussion focuses primarily on effects that are both statistically significant (95% confidence level or greater) and large enough to be policy-relevant (± 0.05). Other interesting effects—and non-effects—are noted as well.

The tables in this chapter present only those variables that were statistically significant across any of the models shown. Full regression results are provided in Appendix B. When interpreting the regression results presented in this chapter and in Appendix B, it is important to note that some variables had more than two possible values. In these cases, one needed to be excluded from the regression. For example, race/ethnicity had five possible values: Asian, Black, Hispanic, Native American, and White. White youth, who made up the largest group in the sample, were excluded from the model. Thus, the significance of all other race/ethnic variables is in comparison to White students. To illustrate, in Table 10 the third column of results on 4-year enrollments indicates that Hispanic youth were 5.5% less likely to enroll in 4-year colleges than White youth, when considering all the other factors in the regression model. Similar interpretations apply for all variable categories for which one value was excluded. Excluded variables are listed in Table 11.

Table 11. Variables Excluded from Regression Analyses

Category	Excluded Variable Description
Demographics	White
	Neither unusually old nor young
Family Background	Parents encouraged postsecondary education a great deal
	Student thought about college as an option for “as long as I could remember”
Extra-Curricular Activities	Studied 1-5 hours per week
	Worked 16 or more hours per week
Preparation	Felt high school prepared somewhat well for college and career goals

4-Year and 2-Year Postsecondary Results. The regressions presented in Table 12 offer a side-by-side comparison of the factors associated with initial 4-year and 2-year postsecondary enrollments by 2006 Central Texas seniors. These regressions are based on the subset of students with both survey and school records (RS 2). The regressions estimated for 4-year enrollments explain a much larger share of the variation compared to the 2-year

enrollment model ($R^2 = 0.22$ v. $R^2 = 0.073$), suggesting that behavior among students bound for 4-year institutions may be more homogeneous than that for other seniors.

Table 12. Factors Related to Enrollment in 4- and 2- Year Postsecondary Education

		Enroll 4 Year	Enroll 2 Year
Model Information	Number of individuals in model	3800	3800
	Model intercept	.050	.286 **
	R-squared	.22	.073
Category	Variable Description		
Demographics	Hispanic	-.055 **	-.006
	Unusually old	-.058	-.146 **
	Low income	-.062 **	-.067 **
Coursework	High school credit foreign language in 8th grade	.034 *	.004
	Retained in the 9th grade	-.003	-.140 **
	Total high school math credits	.026 **	.004
	Total high school AP and/or IB credits	.010	-.017 **
Family Background	Mother completed at least a bachelor's	.056 **	-.054 **
	Parents encouraged postsecondary education somewhat	-.036 *	-.054 **
	Parents encouraged postsecondary education not very much	-.084 **	-.036
	Student first thought about college as an option as a child	-.052 *	.050 *
Extra-Curricular Activities	School-related sports	.068 **	-.030 *
	School-related journalism	-.007	-.040 *
	Non-school-related sports	.042 *	-.003
	Worked 1-5 hours per week during senior year	.046 *	-.034
Counselor Interactions	Course selection/placement	-.004	.037 **
	Financial aid information/application	.008	.056 **
	High school 4-year plan	.003	-.038 *
	Career information	-.026	.052 *
College Preparation Activities	Visited one or more college campus(es)	.050 **	-.043 **
	Completed Recommended High School Program	.036 *	-.006
	Completed and submitted a FAFSA	.053 **	.009
	Completed and submitted a scholarship application	.020	-.058 **
	Took college entrance tests	.080 **	.077 **
	Completed ACC courses while in high school	-.052 **	-.007
	Ordered and submitted a transcript to a postsecondary institution	.111 **	-.049 **
Preparation	Felt high school prepared very well or well for college and career goals	-.030 *	-.014

* Confidence level greater than 95%, ** Confidence level greater than 99%

See Table B-4 for complete regression results.

Several key variables have very similar effects on both 4- and 2-year postsecondary enrollments. Being low-income has a strong negative effect (-0.06) on enrollment. Weak parental encouragement also appears to depress enrollments in both 4- and 2-year colleges. Taking college entrance tests (typically SAT or ACT), however, has a strong positive effect (0.08) on both.

Other factors measured by survey and school records have different effects on 4- and 2-year enrollments. Among demographic factors, being Hispanic is associated with a strong negative effect (-0.055) on 4-year enrollments, as expected, but has no effect on 2-year enrollments, a finding which was not anticipated. Having a mother with at least a bachelor's degree has a significant positive effect (0.056) on 4-year enrollments and a comparable *negative* effect on 2-year enrollments (-0.054), suggesting that families with well-educated mothers are likely to direct their children away from community and technical colleges toward 4-year colleges and universities.

All of the coursework factors have different effects on initial 4- and 2-year postsecondary enrollments; the largest is the negative (-0.14) effect on 2-year enrollments of being retained in the 9th grade. Of the significant extracurricular factors measured, all have either negative or no effects on 2-year enrollments, while participation in sports has strong positive effects on 4-year enrollments.

Counselor-related variables have no significant effects on 4-year enrollments and mixed effects on 2-year enrollments. Meeting with counselors on course selection/ placement, financial aid and career information are positively related to 2-year enrollments, while meeting with counselors about 4-year high school plans had negative effects. The college preparation effects mostly vary as well. Visiting one or more campuses, completing and submitting a FAFSA application, and ordering and submitting transcripts all have positive effects on 4-year enrollments but either negative or no significant effects for 2-year enrollments. One curious college preparation result is that taking ACC courses while in high school seems to depress 4-year enrollments (-0.052). Finally, thinking about college as a child, in comparison to thinking about it for "as long as I can remember," appears to have a strong negative effect on 4-year (-0.052) enrollments, but a positive effect (0.05) on 2-year enrollments.

The implications of similarities and differences for 4-year and 2-year postsecondary enrollment patterns are explored later in this report. For 4-year enrollment decisions, demographic factors and a number of college preparation activities have strong and expected effects, which may readily lend themselves to targeted policy and program strategies. For 2-year enrollment decisions, counselor-related activities and taking college entrance tests may be key levers for boosting enrollments.

The Role of Race/Ethnicity. Given the strong concerns expressed in recent years about inadequate postsecondary enrollment and graduation rates among minority students (e.g., THECB, 2000 and 2004) and the growing numbers of minorities in Texas and in Central Texas in particular, researchers gave special attention to the enrollment patterns of Hispanic and Black youth. As shown previously in Table 4, Asian youth tend to enroll in postsecondary education at higher-than-average rates, while Hispanic and Black youth enroll at rates that are considerably below the average. Hispanic youth have the lowest enrollment rates of any race/ethnic group in Central Texas and are also the fastest growing segment of the population, bolstering this concern.

The story told by these initial postsecondary regression results is quite different for Black and Hispanic youth.¹⁴ Being Black is not associated with significant negative effects on either 4-year or 2-year postsecondary education enrollment (Table 12), nor do such effects surface when examining enrollment patterns by gender (as can be seen in Appendix B). This suggests that for Black youth, low enrollment rates are more a question of family income and factors other than race. Being Hispanic, however, appears to depress initial enrollments in 4-year, though not 2-year, postsecondary education for males as well as females. Thus, being Hispanic appears to reinforce negative 4-year enrollment patterns, independent of low-income status and other factors.

These interpretations are supported by the results of a supplementary set of regressions estimated separately by race/ethnicity, again using Regression Sample 2. Focusing first on 4-year enrollments (shown in Table 13) for Black youth, being low-income is now associated with a strong negative effect (-0.138), the largest coefficient of any race/ethnic group and more than three times the size of the low-income coefficient for

¹⁴ Enrollment patterns for Asian youth are not discussed further since they are such a small part of the sample.

Hispanic youth. Several other factors surface as having significant and strong negative effects on 4-year enrollments for Black youth in these regressions, including negative effects for routinely providing care for family members (-0.086)—a factor that is insignificant for all other race/ethnic groups—and starting to think about college as a child (-0.132) instead of “for as long as I can remember.”

Positive effects on 4-year enrollments are found for Black youth for variables such as taking a foreign language in the 8th grade (0.112), participating in dance as an extracurricular activity (0.132), and two college preparation activities: completing and submitting a FAFSA application, and completing and submitting a college scholarship application, both of which have very strong effects (0.18). None of the counselor-related, extracurricular sports or parental encouragement variables significantly affect 4-year enrollments for Black youth.

Four-year enrollments for Hispanic students appear to be harmed by low-income status and thinking about college as an option since childhood rather than “for as long as I can remember.” Positive effects on 4-year enrollment by Hispanic youth are found for participating in extracurricular sports (0.07 for in- and out-of-school), meeting with their counselor about 4-year plans (0.061), ordering and submitting transcripts (0.086), getting credit for a foreign language in 8th grade (0.053), and taking college entrance tests (0.049).

Table 13. Factors Related to 4-Year Postsecondary Enrollment by Ethnicity¹

		Enroll 4 Year		
		Black	Hispanic	White
Model Information	Number of individuals in model	445	1442	1758
	Model intercept	.128	.069	.002
Category	Variable Description			
Demographics	Low income	-.138 **	-.042 *	-.050
	High school credit foreign language in 8th grade	.112 *	.053 *	.005
Coursework	Total high school math credits	.023	.012	.037 *
	Total high school AP and/or IB credits	.033	.021 *	.002
	Mother completed at least a bachelor's	-.049	-.011	.114 **
Family Background	Parents encouraged postsecondary education somewhat	.069	-.036	-.073 *
	Parents encouraged postsecondary education not very much	.040	-.025	-.150 **
	Parents encouraged postsecondary education not at all	.054	-.041	-.141 *
	Student first thought about college as an option as a child	-.132 *	-.069 *	-.029
Extra-Curricular Activities	School-related dance	.132 *	.015	.007
	School-related sports	.061	.074 **	.069 **
	Non-school-related sports	-.058	.072 **	.024
	Provided routine care for family members	-.086 *	-.003	-.017
	Worked 1-5 hours per week during senior year	-.139	.027	.116 **
Counselor Interactions	High school 4-year plan	-.075	.061 *	-.006
College Preparation Activities	Visited one or more college campus(es)	.061	.014	.078 **
	Completed and submitted a FAFSA	.183 **	-.005	.068 *
	Completed and submitted a scholarship application	.181 **	.063	-.026
	Took college entrance tests	-.001	.049 *	.117 **
	Completed ACC courses while in high school	-.053	.023	-.099 **
	Ordered and submitted a transcript to a postsecondary institution	.081	.086 **	.134 **
Preparation	Felt high school prepared very well or well for college and career goals	.002	-.017	-.060 *

*Confidence level greater than 95%, ** Confidence level greater than 99%

Notes: 1) Asian youth are not shown in this table due to small numbers in the sample.

2) See Table B-5 for complete regression results.

Initial 2-year enrollment regression results (shown in Table 14) for Black youth indicate strong negative effects for receiving weak parental encouragement (-0.153), meeting with counselors about 4-year plans (-0.089) and some college preparation activities. Strong positive effects for Black youth are associated with participating in UIL academic competitions (0.198) and taking AP/IB courses (0.137).

For Hispanic youth, low-income status (-0.147), completing and submitting scholarship applications (-0.098), completing ACC courses while in high school (-0.064), and weak parental encouragement (-0.055) are all associated with negative effects on 2-year enrollments. Positive effects for Hispanic youth stem from meeting with counselors about course selection (0.066), taking college entrance tests (0.103), and thinking about college when still a child (0.122).

Table 14. Factors Related to 2-Year Postsecondary Enrollment by Ethnicity¹

		Enroll 2 Year		
		Black	Hispanic	White
Model Information	Number of individuals in model	445	1442	1758
	Model intercept	.150	.333 **	.318 **
Category	Variable Description			
Demographics	Unusually old	-.135	-.147 **	.021
	Low income	-.003	-.080 **	-.026
Coursework	Total high school AP and/or IB credits	-.010	-.004	-.019 **
Family Background	Parents encouraged postsecondary education somewhat	-.153 **	-.055 *	-.044
	Student first thought about college as an option as a child	.120	.122 **	-.038
Extra-Curricular Activities	School-related sports	-.021	-.021	-.047 *
	School-related UIL academic competitions	.198 *	.047	.015
	Provided routine care for family members	.010	-.042 *	.024
Counselor Interactions	Course selection/placement	.068	.066 **	-.004
	High school 4-year plan	-.089 *	-.039	-.012
College Preparation Activities	Took AP/IB courses	.137 *	-.005	.002
	Visited one or more college campus(es)	-.076	-.019	-.074 **
	Completed and submitted a scholarship application	-.136 *	-.098 **	-.014
	Took college entrance tests	.041	.103 **	.070
	Completed ACC courses while in high school	-.044	-.064 *	.028
	Ordered and submitted a transcript to a postsecondary institution	-.121 *	-.010	-.064 *
Preparation	Felt high school prepared not very well or not at all well for college and career goals	-.001	-.030	.063 *

* Confidence level greater than 95%, ** Confidence level greater than 99%

- Notes: 1) Asian youth are not shown in this table due to small numbers in the sample.
2) See Table B-6 for complete regression results.

The results for 4-year and 2-year postsecondary enrollments thus differ for Black and Hispanic youth and also contrast somewhat sharply with those for White youth. For example, 4-year enrollments for White youth (Table 13) are strongly influenced by having a mother with at least a bachelor's degree (0.114), but low-income status has no effect. These differences suggest that college readiness and promotion strategies should be tailored to the differing needs and patterns of influence by race/ethnicity. One-size-fits-all approaches are unlikely to be successful.

The Role of First-Generation Student Status. The final topic explored in this section is the role of first-generation college student status, an issue that has been the focus of national research (e.g., Choy 2002) and is of particular concern in Texas with its rapidly growing Hispanic population which has traditionally had low rates of postsecondary enrollment. The overall 4- and 2-year postsecondary regressions showed no significant first-generation effects (Appendix B). Nor did such effects surface in the separate regressions by race/ethnicity (Appendix B). It may well be that controlling for so many other key factors—especially income and race/ethnicity—minimizes the potential enrollment effects of being a first-generation student.

Table 15 presents regression results for initial 4- and 2-year postsecondary enrollments estimated separately for first-generation and non-first-generation students, again based on Regression Sample 2. Examining 4-year enrollments for first-generation versus non-first-generation students and comparing these to results for 4-year enrollments presented in Table 12, it is apparent that a number of factors operate differently for the two groups. Only two variables appear to affect first- and non-first-generation students in the same way, both with strong positive effects: participating in extracurricular sports at school, and ordering and submitting transcripts.

In the overall 4-year enrollment regressions (Table 12), being Hispanic had a negative effect, as did being from a low-income family. In the results presented in Table 15, race/ethnicity does not appear to play a role in 4-year college enrollments. For students whose parents had some education beyond high school, however, the adverse low-income effect is even stronger (-0.103). Conversely, being low-income does not have a significant effect on 4-year enrollments for first-generation students. Moreover, some of the college

preparation factors that are associated with positive enrollment effects for non-first-generation students and students as a whole do not have such effects for first-generation students, including such important ones as visiting college campuses, completing and submitting FAFSA, and taking college entrance exams.

Activities that do seem to boost 4-year enrollments for first-generation students include completing and submitting scholarship applications (0.092), taking the PSAT (0.068) and ordering and submitting transcripts (0.081). Weak parental encouragement, participating in non-school-related environmental projects, and having first thought about college from childhood through high school (rather than for “as long as I can remember”) appear to play significant negative roles in 4-year enrollments for first-generation students but not others. Working few hours (1-5 hours/week) rather than 16 or more hours per week is related to higher 4-year enrollments for non-first-generation students but not for others.

Table 15. Factors Related to Postsecondary Enrollment by First Generation Status

		Enroll 4 Year		Enroll 2 Year	
		First Generation	Not 1st Generation	First Generation	Not 1st Generation
Model Information	Number of individuals in model	1302	2498	1302	2498
	Model intercept	.179**	.007	.241**	.307**
Category	Variable Description				
Demographics	Black	.080	-.001	-.111**	-.005
	Unusually old	-.045	-.053	-.149**	-.130*
	Low income	-.016	-.103**	-.088**	-.051*
Coursework	High school credit foreign language in 8th Grade	.007	.045*	.012	.001
	Total high school math credits	.009	.032**	.002	.009
	Total high school AP and/or IB credits	.039**	.001	-.017*	-.018**
Family Background	Mother completed at least a bachelor's		.059**		-.044*
	Parents encouraged postsecondary education somewhat	-.046*	-.034	-.020	-.077**
	Parents encouraged postsecondary education not very much	-.106*	-.060	-.065	-.023
	Parents encouraged postsecondary education not at all	.021	-.116**	.000	-.069
	Student first thought about college as an option as a child	-.099**	-.037	.073*	.033
	Student first thought about college as an option in middle/junior high school	-.064*	.026	-.004	.027
	Student first thought about college as an option in high school	-.077*	-.005	.044	-.001
Extra-Curricula Activities	School-related sports	.057*	.077**	-.038	-.027
	School-related journalism	-.001	-.013	-.016	-.048*
	Non-school-related sports	.032	.043*	.035	-.021
	Non-school-related environmental projects/activities	-.094*	-.024	.040	.030
	Worked 1-5 hours per week during senior year	.017	.070*	.026	-.054*
	Worked 6-10 hours per week during senior year	-.024	.037	.095*	-.008
Counselor Interactions	Course selection/placement	-.020	.004	.061*	.021
	Personal and/or family issues	-.012	-.023	-.073*	-.013
	Career information	-.040	-.016	.033	.058*
College Preparation Activities	Visited one or more college campus(es)	-.004	.080**	-.052*	-.040
	Completed and submitted a FAFSA	.041	.055*	.057	-.009
	Completed and submitted a scholarship application	.092*	-.009	-.086*	-.051*
	Took the PSAT exam	.068*	-.003	-.048	.032
	Took college entrance tests	.035	.095**	.096**	.056*
	Completed ACC courses while in high school	.026	-.092**	-.028	.002
	Ordered and submitted a transcript to a postsecondary institution	.081*	.128**	-.030	-.061**

* Confidence level greater than 95%, ** Confidence level greater than 99%

Notes: 1) Darker shading indicates variables were not included in the regression.

2) See Table B-7 for complete regression results.

Some of the factors affecting initial 2-year enrollments change little from the overall results (Table 12) when sorted by first-generation status (Table 15), including being low-income (remaining negative for both, though much stronger for first-generation students), being an older student (still strongly negative for both), and completing and submitting scholarship applications (still negative for both). Other factors operate differently when separate regressions by status are estimated. Although no race/ethnic factor was significant in the overall 2-year regression (Table 12), being Black is strongly negative for those who would be first-generation (-0.111) but not for others.

Other factors that were significant in the overall 2-year enrollment regressions did change when sorted by first-generation status. Factors that are significant overall and for first-generation students include meeting with counselors about course selection/placement (0.061) and thinking about college as a child, which becomes somewhat stronger (0.073). Factors that go the other way, losing significance except for non-first-generation students, include meeting with counselors about career information (0.058), ordering and submitting transcripts (-0.061), and getting some parental encouragement (-0.077). Several other factors lose significance altogether, including participating in extracurricular sports and meeting with counselors about financial aid information.

Thus, as expected, first-generation status appears to make a substantial difference in the way many factors operate on students' decisions about initial enrollments in 4-year and 2-year postsecondary education. As with race/ethnicity, to be successful, policymakers and educators should consider developing college readiness and promotion strategies that specifically address these differences.

Postsecondary Employment

While there were 9,193 seniors in the six participating ISDs, relatively complete school records (9th through 12th grade) could only be combined with employment outcomes for 4,206 of these students in four districts due to district- and student-level consent issues, unavailable identifiers (SSNs), or district data processing capacity. Table 16 shows the progression from the total population of 2006 seniors, overall and in each ISD, to the employment regression samples.

Two basic sets of regressions were run on initial postsecondary employment outcomes, one based just on administrative school records for 4,206 students in Regression Sample 3 (RS 3) and the other for the 1,639 students for whom both survey and school records were available (RS 4). Employment regressions are for all students in Pflugerville and Round Rock for whom complete data, including SSNs, are available, as well as students meeting those criteria who provided consent in Austin and Leander (RS 3 and 4). The employment analysis is hindered by the lack of out-of-state UI employment data. Thus, results should be interpreted as only representing UI-covered employment in Texas.

Table 16. 2006 Seniors in the Population, in School Records, and in Employment Regressions, Overall and by School District

School District	Total 2006 Senior Population	Total Number in Employment Regressions	
		School Records (RS 3)	School Records plus Survey Data ¹ (RS 4)
Austin	4,330	1,246 ²	1,160
Del Valle	251	0 ³	0
Leander	1,135	236 ²	183
Manor	132	0 ⁴	0
Pflugerville	1,092	827	126
Round Rock	2,253	1,897	170
Total	9,193	4,206	1,639

¹ These include all students with complete school record and survey data, including variables needed to link records across all data sources.

² School records were only provided for consenters.

³ School records were not provided for seniors from the class of 2006.

⁴ Information on coursework was not provided.

Model Analysis – Postsecondary Employment

Table 17 demonstrates the contribution of adding survey data to administrative records for 2006 Central Texas seniors, much as was done for postsecondary enrollment in Table 10. The first column presents regression results for employment based solely on seniors’ school records linked to UI wage records (RS 3). The next column also uses only students with complete school records, but restricts the sample to students for whom survey data was available (RS 4). The last column presents regression results for survey respondents, taking full advantage of survey and administrative data in estimating the employment outcome regression (RS 4).

Table 17. Employment Regression Models

		RS 3	RS 4	
		School Records (SR)	SR	SR plus Survey Data
Model Information	Number of individuals in model	4206	1642	1642
	Model intercept	.625 **	.541 **	.670 **
	R-squared	.083	.079	.165
	Akaike Information Criterion ¹		2272	2224
Category	Variable Description			
Demographics	Hispanic	.119 **	.117 **	.086 **
	Coursework	High school credit algebra in 8th grade	-.060 **	-.031
	Total high school AP and/or IB credits	-.042 **	-.046 **	-.021 **
Family Background	Mother completed at least a bachelor’s			-.081 **
	Parents encouraged postsecondary education somewhat			.069 *
Extra-Curricular Activities	School-related dance			.074 *
	School-related UIL academic competitions			-.079 *
	Worked 1-5 hours per week during senior year			-.218 **
	Worked 11-15 hours per week during senior year			-.096 *
	Did not work during senior year			-.223 **
College Preparation Activities	Visited one or more college campus(es)			-.064 *

* Confidence level greater than 95%, ** Confidence level greater than 99%

Notes: 1) The Akaike Information Criterion was not calculated for the first model since it is estimated over the universe of data.

2) Darker shading indicates variables were not included in the regression.

3) See Table B-8 for complete regression results.

As with the preceding analysis of postsecondary enrollment, several points can be made based on these results. First, analysis based solely on administrative records presents an incomplete and somewhat misleading story about the factors associated with initial employment outcomes after high school. Comparing across the columns, while being Hispanic and the number of AP/IB credits remain significant, the strength of their effects diminishes for the richer model using survey and administrative data. Moreover, a number of the work-related survey variables play a strong role. Second, adding survey data to the administrative records increases the “goodness of fit”, or R^2 , (from 0.079 to 0.165) and improves the explanatory power of the resulting regressions modestly, again as measured by a decrease in the Akaike Information Criterion. Finally, adding survey variables to the data set also points more directly to possible policy and program actions.

Factors Associated with Postsecondary Employment

Table 18 presents initial employment outcome results for 1,642 seniors with complete data, based on linked administrative and survey data, including SSNs (RS 4). Non-consenting Austin ISD students, who were included in the postsecondary education models, are excluded from this sample. The first column of results shows the factors affecting employment overall, *regardless* of a youth’s education status in the fall of 2006. The next column presents the factors associated with employment *and* simultaneous enrollment in 2-year or 4-year postsecondary education in Fall 2006. The last column provides regressions results for youth who were just employed in the fall of 2006.

Table 18. Factors Related to Employment

		Employed (Regardless of Enrollment)	Employed AND Enrolled	Employed NOT Enrolled
Model Information	Number of individuals in model	1642	1642	1642
	Model intercept	.670 **	.175 **	.495 **
Category	Variable Description			
Demographics	Asian	-.046	.106	-.152 **
	Hispanic	.086 **	.048	.037
	Unusually old	-.057	-.124 *	.066
	Low income	-.055	-.080 **	.025
Coursework	Retained in the 9th grade	-.073	-.215 **	.142
	Total high school AP and/or IB credits	-.021 **	-.013 *	-.008
Family Background	Mother completed at least a bachelor's	-.081 **	-.027	-.055 *
	Parents encouraged postsecondary education somewhat	.069 *	-.004	.073 *
	Parents encouraged postsecondary education not at all	.077	-.090	.167 *
	Student never thought about college as an option	.121	-.056	.177 *
Extra-Curricular Activities	School-related theater/drama	.074	.107 **	-.033
	School-related dance	.074 *	.056	.018
	School-related UIL academic competitions	-.079 *	-.031	-.049
	Worked 1-5 hours per week during senior year	-.218 **	-.080 *	-.138 **
	Worked 11-15 hours per week during senior year	-.096 *	-.051	-.045
	Did not work during senior year	-.223 **	-.109 **	-.114 **
Counselor Interactions	Course selection/placement	-.026	.033	-.059 *
	Personal and/or family issues	.047	-.042	.089 *
College Preparation Activities	Visited one or more college campus(es)	-.064 *	-.015	-.049
	Took college entrance tests	-.052	.068 *	-.120 **
	Ordered and submitted a transcript to a postsecondary institution	-.036	.035	-.072 **

* Confidence level greater than 95%, ** Confidence level greater than 99%

See Table B-9 for complete regression results.

Only three factors appear to have a significant positive effect on Fall 2006 employment overall, regardless of enrollment status: being Hispanic (0.086), having only modest rather than strong parental encouragement to go to college (0.069), and participating in school-related dance activities (0.074).¹⁵ Strong negative effects on employment are

¹⁵ Several other factors are statistically significant (e.g., Native American), but the numbers of students involved are extremely small.

present for having a mother with at least a bachelor's degree (-0.081), participating in UIL academic competitions (-0.079), visiting college campuses (-0.064), and several of the variables reflecting limited or no work in the student's senior year. These effects are in line with expectations.

The factors associated with both working and being enrolled in postsecondary education in Fall 2006 are different from those discussed above. Nearly all of the significant measured effects are negative, with the strongest associations as follows: being retained in 9th grade (-0.215), being a much older student (-0.124), not working in the student's senior year (-0.109), and being low-income (-0.08). These results also are largely as expected.

Finally, the factors associated with just working and not being enrolled in postsecondary education in Fall 2006 differ once again from the results discussed above. Positive factors for just working include meeting with counselors about personal and family issues (0.089) and getting little or no parental encouragement to go to college, both as expected. Negative factors for just working include being Asian (-0.152), having a mother with at least a bachelor's degree (-0.055), and a number of the college preparation variables. These too are as expected. An interesting result is that working few hours or not at all in the senior year is also negatively associated with just working.

Summary

Through a number of regression models, researchers identified and analyzed factors that were most strongly associated with postsecondary education and employment outcomes. Comparison of the models showed that using a data set that combines both survey and administrative data improves the explanatory power of the models used. Many of the findings are both instructive and suggestive of actions that may be taken by local school districts.

Initial postsecondary enrollments in further education by 2006 Central Texas seniors in the research sample are related to a number of factors. In Table 19 below, factors that are significantly and positively associated with 4-year and 2-year enrollments through December 2006 are summarized for all youth in the sample and for two key groups of interest— Hispanic youth and those who would be first-generation college students.

Table 19. Factors Positively Related to Postsecondary Enrollments

	4-year Enrollments	2-year Enrollments
All	<ul style="list-style-type: none"> • Ordering and submitting transcripts • Taking college entrance tests • Participating in school-related sports • Mother has at least a bachelor's degree • Completing and submitting FAFSA • Visiting one or more college campuses 	<ul style="list-style-type: none"> • Taking college entrance tests • Meeting with counselors about financial aid applications • Meeting with counselors about career information • Thinking about college as an option since childhood (vs. for "as long as I can remember")
Hispanic	<ul style="list-style-type: none"> • Ordering and submitting transcripts • Participating in sports activities (school, non-school) • Meeting with counselors about 4-year plans • Credit for foreign language in 8th grade • Taking college entrance tests 	<ul style="list-style-type: none"> • Thinking about college as an option since childhood (vs. for "as long as I can remember") • Taking college entrance tests • Meeting with counselors about course selection/placement
First-Generation	<ul style="list-style-type: none"> • Completing and submitting scholarship applications • Ordering and submitting transcripts • Taking the PSAT exam • Participating in school-related sports 	<ul style="list-style-type: none"> • Taking college entrance tests • Working between 6-10 (vs. 16+ hours per week during senior year) • Thinking about college as an option since childhood (vs. for "as long as I can remember") • Meeting with counselor about course selection and placement

A summary of the factors that are significantly and negatively associated with postsecondary enrollments through December 2006 is presented in Table 20.

Table 20. Factors Negatively Related to Postsecondary Enrollments

	4-year Enrollments	2-year Enrollments
All	<ul style="list-style-type: none"> • Weak parental encouragement • Being low-income • Being Hispanic • Completing ACC courses while in high school • Thinking about college as an option since childhood (vs. for “as long as I can remember”) 	<ul style="list-style-type: none"> • Being unusually old • Being retained in 9th grade • Being low-income • Completing and submitting scholarship applications • Mother has at least a bachelor’s degree • Some (vs. strong) parental encouragement
Hispanic	<ul style="list-style-type: none"> • Thinking about college as an option since childhood (vs. for “as long as I can remember”) 	<ul style="list-style-type: none"> • Being unusually old • Completing and submitting scholarship applications • Being low-income • Completing ACC courses while in high school • Some parental encouragement
First-Generation	<ul style="list-style-type: none"> • Weak parental encouragement • Participating in non-school environmental activities • Thinking about college as an option since childhood, middle school or high school (vs. for “as long as I can remember”) 	<ul style="list-style-type: none"> • Being unusually old • Being Black • Being low-income • Completing and submitting scholarship applications • Meeting with counselors about personal/family issues • Visiting one or more college campuses

Researchers also examined factors significantly related to employment, whether or not the individual was also simultaneously enrolled in college. A summary of factors associated with employment in the fall quarter after graduation is presented in Table 21.

Table 21. Factors Associated with Employment

	Positive Factors	Negative Factors
Employed, Regardless of Enrollment	<ul style="list-style-type: none"> • Being Hispanic • Participating in school-related dance activities • Weak parental encouragement to attend college 	<ul style="list-style-type: none"> • Not working during senior year • Mother has at least a bachelor's degree • Working 1-5 or 11-15 (vs. 16+ hours per week during senior year) • Participating in UIL academic competitions • Visiting one or more college campuses
Employed and Enrolled	<ul style="list-style-type: none"> • Participating in school-related theater and drama activities • Taking college entrance tests 	<ul style="list-style-type: none"> • Being retained in 9th grade • Not working during senior year • Being low-income • Being unusually old • Working just 1-5 (vs. 16+ hours per week during senior year)
Employed, Not Enrolled	<ul style="list-style-type: none"> • Never thinking about college as an option after high school • Weak parental encouragement to attend college • Meeting with counselors about personal or family issues 	<ul style="list-style-type: none"> • Being Asian • Working just 1-5 (vs. 16+ hours per week during senior year) • Taking college entrance tests • Not working during senior year • Ordering and submitting transcripts • Meeting with counselors about course selection/placement • Mother has at least a bachelor's degree

Chapter V. Conclusions, Recommendations, and Plans for Future Work

Conclusions

This *First Look* at the initial postsecondary education and employment outcomes and related factors for 2006 Central Texas high school seniors leads to several important conclusions. It is important to acknowledge the data and other limitations affecting the analysis presented in this first linking of seniors' high school records and senior survey data with postsecondary education and employment data. Primary limitations include the short time frame for following student outcomes; administrative and survey data issues affecting certain schools and districts; and incomplete data on high school settings, postsecondary enrollments and employment. However, as discussed below, even the initial findings from this research provide valuable information to participating school districts, the larger Central Texas community and the research literature. As the project moves forward and overcomes the limitations cited above, the strength of the findings and their potential to guide education policy and program decisions in Central Texas will be even greater.

Major conclusions stemming from the first look at initial education and employment outcomes for 2006 seniors are as follows.

1. *The findings clearly demonstrate the value of the research design.* Research models that link information from individual school and employment administrative records with additional student background information collected in the senior survey perform better than models that rely only on administrative records. Studies that rely solely on administrative data miss important differences both across and within demographic groups that are significantly associated with postsecondary transitions. When survey data are combined with administrative data, as is the case in this study, these differences are revealed, and the power of the research findings increases dramatically. Over time, analyses of this richer data set will also enable researchers to develop recommendations that will enable school districts and community organizations to tailor programs, policies, and interventions to segments of the student population, rather than implementing one-size-fits-all approaches.
2. *Education and student background factors influence overall 2-year and 4-year postsecondary education enrollments in different ways. These factors also work differently for seniors from different socioeconomic, race/ethnic, and family*

backgrounds. For example, 2-year college enrollments by first-generation and Hispanic students were positively affected by thinking about college as an option since childhood (rather than for “as long as I can remember”), while 4-year college enrollments for these youth were negatively affected. Initial enrollments in further education by Central Texas seniors are related to a number of factors. Major positive factors across all sampled youth include a number of specific college preparation activities, although these work differently for enrollments in 4-year and 2-year colleges. Major negative factors include family background factors, including weak parental encouragement, thinking about college as an option later in life, lower family income and less educational attainment. To improve college-going rates among minority and first-generation youth, school and community policymakers should understand and address these differences.

3. *Factors most strongly related to employment after high school were different from those that affected college enrollments.* This result is not unexpected given that more youth were found to be employed than were enrolled in college. For the subset of youth who were just employed in Fall 2006, important factors included having never thought about college as an option after high school and having met with counselors about personal or family problems. Youth who were both employed and enrolled in further education were linked to participating in school-related theater and drama activities, and taking college entrance tests while in high school.
4. *Some Central Texas results varied from the existing literature.* Among these, race/ethnicity and gender are particularly notable. In the literature (e.g., Choy, 2001), researchers found that females are far more likely to attend college than males. In the regression models run on Class of 2006 seniors, gender was never found to be statistically significant in college enrollments. Nor did race/ethnicity play as significant or as certain a role in enrollment or employment. Other variables (such as high school math credits and study habits) did not have any significant associations with enrollments or were associated with enrollments in only one type of institution (such as taking AP/IB courses and having a mother with at least a bachelor’s degree) despite their importance in other research studies or common perceptions of college-going behaviors. It could be that students with these characteristics exhibited other factors that played a larger role in influencing college enrollments. In future years, researchers will explore this issue further.

Recommendations

This is the first in a series of reports analyzing postsecondary outcomes; future reports will resolve many of the data limitations and include longer-term outcomes. Even so, these initial findings and conclusions suggest several recommendations for school districts to consider.

1. Schools, districts, and other stakeholders should tailor college preparation programs and policies to meet the needs of specific groups of students. In addition to being aware that one-size-fits-all approaches do not meet the needs of all students, there are important differences within groups that require careful attention when planning their educational programs.
2. School districts and the community should focus on strategies to create a college-going culture much earlier in students' school careers, particularly focusing on pre-kindergarten and early elementary school. By thinking holistically about the education pipeline, schools can work through personnel and involve parents at all levels of education to create a stronger push towards college.
3. Schools must work harder to involve parents in their efforts to create a college-going culture. One avenue for this work would be to make better use of Parent Teacher Associations. Weak parental encouragement to attend college was strongly and negatively related to enrolling in postsecondary education following high school across a number of population groups.
4. High schools need to strengthen counseling, college preparation, and extracurricular activities (particularly sports), all of which play a significant positive role in transitions to college for some segments of their student population. By being more actively aware of which students will benefit the most from these different activities, schools can more effectively target personnel and resources.

The conclusions and recommendations in this first report on initial outcomes for 2006 Central Texas seniors are based on all of the seniors in our research samples, regardless of the school or school district they attended. As researchers continue to work with local school districts to overcome data limitations, and more employment and postsecondary enrollment data become available over time, it will be possible to develop recommendations for individual school districts.

Plans for Future Work

As the work of the Student Futures Project progresses, researchers plan to take a number of steps to enhance both the data set and statistical methods used in this research. These are summarized below.

1. Increase survey response and consent rates and investigate options for obtaining full access to information on non-consenters in Austin ISD.
2. Develop school-level variables to describe differences in educational programs and characteristics of individual high schools not measured in the models used in this report.
3. Incorporate postsecondary enrollment data from the Texas Higher Education Coordinating Board and explore options for measuring out-of-state employment.
4. Increase the timeframe in which to observe outcomes.
5. Test and refine different versions of the statistical models and continue exploring the use of statistical weighting techniques.

Bibliography

- Akaike, Hirotugu. (1973). "Information theory and an extension of the maximum likelihood principle." In *Second International Symposium on Information Theory*, ed. B. N. Petrov and F. Csaki, 267-281. Budapest: Akailseoniai-Kiudo.
- Chatterjee, Samprit, Ali S. Hadi, and Bertram Price. (2000). *Regression Analysis by Example*, 3rd edition. New York: Wiley Interscience.
- Choy, Susan P. (2002). *Access & Persistence: Findings from 10 Years of Longitudinal Research on Students*. Washington, DC: American Council on Education.
- Choy, Susan P. (2001). *Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence, and Attainment*. Washington, DC: U.S. Department of Education, National Center for Educational Statistics, NCES 2001-126.
- Greater Austin Chamber of Commerce (2007). *Draft Plan for 20,010 in 2010*. Austin: GAC.
- King, Christopher T., Deanna T. Schexnayder and Hannah Gourgey, Eds. (2006). *Beyond the Numbers: Improving Postsecondary Success Through A Central Texas High School Data Center*, Austin: Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, Policy Research Report 148.
- Little, Roderick J.A. and Donald B. Rubin (2002). *Statistical Analysis with Missing Data*, 2nd Edition. New York: Wiley Interscience.
- Schexnayder, Deanna T., Greg Cumpton and Nicole Beck (2007). *Central Texas High School Graduate Data Center: Findings from the 2006 Senior Surveys*, Austin: Ray Marshall Center for the Study of Human Resources, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin and Skillpoint Alliance, March.
- Schexnayder, Deanna T., Brendan Hill, Greg Cumpton, Esmeralda Garcia, Tara C. Smith, Christopher T. King, Hannah Gourgey and David Wilkinson (2006). *Central Texas High School Graduate Data Center: Year One Final Report*, Austin: Ray Marshall Center for the Study of Human Resources, Lyndon B. Johnson School of Public Affairs, University of Texas at Austin and Skillpoint Alliance, March.
- Texas Higher Education Coordinating Board (2000). *Closing the Gaps by 2015*. Austin: THECB.
- Texas Higher Education Coordinating Board (2004). *Closing the Gaps by 2015: 2004 Progress Reports*. Austin: THECB.

Appendix A: Technical Appendix

This technical appendix provides additional information on the research data sets that were described briefly in Chapter 2. This includes descriptions of data sources, the process used to create the research data sets, variables included in the analysis and their expected impact on postsecondary enrollment and employment, and data set limitations to be addressed in future reports.

Data Sources

Historical School Records Data. In the state of Texas, districts are required to report specific student-, school-, and district-level information to the Texas Education Agency (TEA). Although some districts may have more complete administrative data in their own systems than that maintained by TEA, the variables used in the PEIMS (Public Education Information Management System) reporting system are consistent across districts. Hence, when RMC researchers were able to access the data reported directly to PEIMS from each district, this source was used for comparisons across districts. Where researchers did not have access to this data in Manor and Austin ISDs, requests were made to ensure variables were defined as closely to PEIMS variables as possible.

Non-Austin ISDs: School records received from Leander, Manor, Pflugerville, and Round Rock ISDs included subsets of the data reported to the TEA through PEIMS and additional information maintained separately by each district, including student high school transcripts. Despite the consistency in sources of data, the actual records received by researchers varied by district. Whereas some of the districts provided complete PEIMS files for all seniors in 2006, others chose to exclude some of the variables normally reported to TEA (e.g., detailed information on student discipline, special education information) due to district-level restrictions on data sharing. In Leander, student records including both PEIMS and high school transcript information were provided only for those students who gave direct consent to enter into the study. Manor ISD provided information on student demographics and characteristics, but did not include high school transcript information. Pflugerville ISD did not provide some PEIMS records for the Class of 2006, which necessitated some adjustment to how their seniors were defined, as detailed below in the section on creation of data sets.

Researchers obtained PEIMS student-IDs from all consenters in Leander, and all students in the other districts mentioned above. For students who have an SSN and reported it to their district, their PEIMS student-ID is their SSN. Students who either do not have an SSN or who chose not to report it to their school district, have a PEIMS student-ID generated for them. Employment information could only be determined for students whose PEIMS ID is their SSN.

Austin ISD: The primary distinction between the districts discussed above and Austin is that Austin ISD provided pre-computed variables for all seniors in the class of 2006 through a data-sharing agreement (DSA) signed in October 2006. Information on how the variables were derived, and any difference between the variables and those reported to PEIMS was provided to RMC researchers. Researchers also obtained additional information, including PEIMS student IDs, for student consenters in Austin ISD.

Senior Survey Data. Researchers at RMC developed a survey instrument to derive data on variables determined to be of interest (from the literature review) but which could not be obtained through prior student records. RMC researchers collected this survey data for 2006 seniors from Leander, Manor, Pflugerville, and Round Rock ISDs prior to their graduation.

The Austin ISD Department of Program Evaluation conducts a yearly senior exit survey of students in its high schools and provided this survey data to RMC researchers. Many questions asked on the Austin ISD survey in 2006 were similar enough in wording and answer choices as to be essentially the same as those in the RMC survey instrument. In 2005 and then again in the spring of 2006, discussions between both organizations resulted in a closer alignment of these surveys.

Postsecondary Education and Employment Outcomes Data. Initial student outcomes data were collected through December 2006. Future reports will extend the time period for which student outcomes are measured for these students.

National Student Clearinghouse: National Student Clearinghouse (NSC) data is based on college directory information from over 3,000 participating colleges nationwide, and includes information on student dates of enrollment, location, name, and type of institution, and whether any degrees and/or honors were awarded. RMC researchers

submitted student names and birthdates to the NSC for each student from Leander (consenters only), Manor, Pflugerville, and Round Rock, for whom the information was available. This file was sent to the NSC on April 19, 2007 and consisted of 4,129 students. Austin ISD currently works separately with the NSC to obtain this information for their students. As part of the DSA signed with RMC, AISD provided an indicator signifying student postsecondary enrollment in a 4-year or 2-year NSC institution for each 2006 senior.

University of Texas at Austin: In order for a student to be found using NSC data, that student must attend a postsecondary institution currently included in the NSC database. Not all postsecondary institutions in the state of Texas are included in the NSC data (see data limitations section below), the largest of which is the University of Texas at Austin. Hence, for all students not found using NSC data from Leander (consenters only), Manor, Pflugerville, and Round Rock, researchers used directory information provided by the University of Texas at Austin (UT) Registrar to find additional students not included in the NSC database.

Texas Workforce Commission: As the administrator for the Unemployment Insurance (UI) program TWC maintains the UI wage records database system. This database contains quarterly earnings data that covers over 95% of Texas employment. Employees are identified in these records by their Social Security numbers (SSNs). For this *First Look* report, RMC researchers used UI data from the 4th calendar quarter of 2006 to ensure that student postsecondary outcomes were not biased by student summer employment.

Construction of Research Data Sets

Researchers attempted to compile these various data sources into a single dataset containing all of the pertinent information required for analysis; however, due to constraints on linking these records, discussed below, several datasets eventually had to be constructed for use in the analyses in this report. The first step in bringing together these data sources relied on defining the senior class of 2006. In all districts except Pflugerville, the senior class is defined as those students who, on October 26, 2005, were currently enrolled and considered seniors, as reported to TEA through PEIMS. In Pflugerville, seniors were defined as those classified as 12th graders during each six week period of the 2006-07 school year, as PISD did not provide RMC researchers with the Fall 2006 PEIMS file for the senior class of

2006. Examination of the differences between these definitions for the senior class, in the limited number of districts where available, showed small differences in these two classifications. Other than this variation in the definition of the senior class of 2006, the primary differences in linking files to create the final datasets stemmed from differences between Austin ISD and the other districts.

Non-Austin ISD Linking Process: RMC researchers linked all the data across sources for all students in non-Austin ISD districts. Students over the age of 18 (and the parents of those students under the age of 18) who gave consent for inclusion in this study provided their local student ID on the study's consent form which contained a randomly generated unique survey ID that students entered into their survey. Other than this survey ID, which could be linked back to the consent form, the survey itself was anonymous, so students who either chose not to be included in the study or who provided an incorrect survey ID could not be linked to their consent form. Researchers then used the local student ID from the consent form to link students to their prior administrative student records. Student birth dates and names (where both were available) were then sent to NSC for linking to their database. Student SSNs (where available) were used to link administrative school records to UI employment data for the 4th quarter of 2006.

Austin ISD Linking Process: Austin ISD researchers provided RMC researchers with a file that included selected variables from student records for all 2006 seniors linked to information from AISD's senior survey and postsecondary enrollment outcomes using NSC data. RMC researchers then submitted a file listing students who consented to give additional information to the Student Futures Project. Among this additional information was the student SSN, for those students who both had an SSN and reported it to Austin ISD. RMC researchers used this information to link student records for Austin ISD consenters to UI employment data for the 4th quarter of 2006.

Contents of Different Research Datasets

Universe of Students in Each Sample. Due to gaps in the data provided by some school districts, several research samples were created in order to maximize the number of students included in each level of analysis. Table A-1 below more completely describes the universe included in each study sample and the limiting factors in their composition.

Table A-1: Study Samples in this Report

	Postsecondary Enrollment	Employment
Descriptive Analyses	DS1	DS2
Sample size <i>Limiting Factors</i>	8,295 seniors <i>Del Valle ISD did not provide individual school records</i> <i>Leander ISD only provided school records for students giving direct consent</i>	4,841 seniors <i>In addition to the limitations described for DS1:</i> <i>Social Security Numbers were not available in every individual school record</i> <i>Austin ISD only provided SSNs for students giving direct consent.</i>
Regression Analyses	RS1	RS3
<u>Using administrative data only:</u> Sample size <i>Limiting Factors</i>	7,393 seniors <i>In addition to the limitations described for DS1:</i> <i>Manor ISD did not provide detailed individual school records</i> <i>Some student records across other districts were incomplete</i>	4,206 seniors <i>Limitations mirror those described for DS2 and RS1.</i>
	RS2	RS4
<u>Using administrative and survey data:</u> Sample size <i>Limiting Factors</i>	3,800 seniors <i>In addition to the limitations described in RS1:</i> <i>Complete survey information was not available for all students with complete individual school records</i>	1,642 seniors <i>In addition to the limitations described in RS3:</i> <i>Complete survey information was not available for all students with SSNs and complete school records</i>

The total number of seniors in the six participating school districts in 2006 was 9,193. Enrollment outcomes (DS 1) include all students from Austin, Leander (consenters only), Manor, Pflugerville, and Round Rock ISDs, and totaling 8,295 seniors. Employment outcomes (DS 2) are for all students from Austin (consenters only), Leander (consenters only), Manor, Pflugerville, and Round Rock for whom SSNs are available, totaling 4,841 students.

Enrollment regressions include all students in Austin, Leander (consenters only), Pflugerville, and Round Rock for whom complete school administrative data are available (RS1 and RS2). Employment regressions include all students in Pflugerville and Round

Rock and consenting students in Austin and Leander for whom complete data, including SSNs, are available (RS3 and RS4).

For the regression analyses based only on administrative school records data, there are 7,393 seniors in RS1, and 4,206 in RS3. When survey data are combined with administrative records in the regression analyses, there are 3,800 seniors in RS2, and 1,642 in RS4.

Demographic characteristics of each of these four research samples are included in Table A-2 below.

Table A-2: Demographic Characteristics of Research Samples

	Enrollment Regressions		Employment Regressions	
	RS1	RS2	RS3	RS4
N	7393	3800	4206	1642
Asian	5%	4%	7%	5%
Black	13%	12%	14%	13%
Hispanic	32%	38%	24%	33%
White	49%	46%	55%	49%
Males	49%	47%	48%	45%
Females	51%	53%	52%	55%
Low income	29%	32%	24%	28%

Explanatory Variables and Their Expected Impacts. Explanatory variables included in these datasets do not encompass the entirety of influential factors identified from the literature review, but only those for which enough information was provided from most of the participating districts and students to warrant their inclusion. RMC researchers used only those variables from both the prior schools records and the different surveys that were common to both the Student Futures Project and Austin ISD.

Some of the explanatory variables require definition. Seniors outside of the 90th percentile confidence limits of a normal distribution as of October 2005 were labeled older (>

18.98 years) or younger (<16.53 years) than the norm. The mean age for all seniors was 17.76 as of October 2005. Students were classified as low income if their family’s income was at or below the official federal poverty line, or if they were eligible for free or reduced lunch programs, TANF, Food Stamps or Pell Grants.

In the first phase of this project, researchers at the Ray Marshall Center (RMC) reviewed literature examining the impact of variables upon student enrollment in postsecondary education; details on the literature reviewed for this project are presented in *Central Texas High School Graduate Data Center: Year One Final Report* (Schexnayder et al 2006). Table A-3 below describes researchers’ expectations for each variable used in the regression analysis in this report, providing definitions of the variables where appropriate.

Table A-3: Variables Examined and Expected Effects on Enrollment and Employment

Category	Factors that Lead to or Hinder a Successful Postsecondary Transition	Expected Effect on College Enrollment	Expected Effect on Employment
Demographics	Race, if not white	-	+
	Age, if outside normal range		
	-Unusually Old (> 18.98 years as of Oct, 2005)	-	+
	-Unusually Young (< 16.53 years as of Oct, 2005)	+	-
	Gender, if not male	+	-
Coursework	Low Income	-	+
	High school credit foreign language in 8 th grade	+	-
	High school credit algebra in 8 th grade	+	-
	Retained in 9 th grade	-	+
	Total high school math credits (for more credits)	+	-
Family Background	Total high school AP/IB credits (for more credits)	+	-
	First-generation college student	-	+
	Mother completed at least a bachelor’s degree	+	-
	Parental encouragement for postsecondary education	+	-
Extracurricular Activities	Thought about college as an option (for those who thought about it the longest)	+	-
	Music	+	-
	Theater/drama	+	-
	Dance	+	-
	Sports	+	-
	UIL academic competitions	+	-
	Journalism	+	-
	Speech/debate	+	-
	Community service	+	-
	Environmental projects/activities	+	-
	Other	?	?
	Providing routine care for family members	-	+
Study habits, hours per week (for more hours studied)	+	-	

Category	Factors that Lead to or Hinder a Successful Postsecondary Transition	Expected Effect on College Enrollment	Expected Effect on Employment
	Work habits, hours per week (for working 16 or more hours per week)	-	+
Counselor Interactions	Scheduling	+	?
	Building resumes/writing college essays	+	+
	Course selection/placement	+	-
	Financial aid information/application	+	-
	Scholarship information/application	+	-
	Conflict resolution	+	?
	Graduation plans	+	-
	Personal and/or family issues	-	?
	High school 4-year plan	+	-
	Parent conference	+	?
	Graduation credit verification	+	-
	Teacher conference	+	?
	Testing interpretation	+	?
	Career information	+	?
College information/application	+	-	
College Preparation Activities	Took AP/IB courses	+	-
	Visited one or more college campus(es)	+	-
	Completed Distinguished Achievement Program	+	-
	Completed Recommended High School Program	+	-
	Completed and submitted a FAFSA	+	-
	Completed and submitted a scholarship application	+	-
	Took the PSAT exam	+	-
	Took college entrance tests	+	-
	Completed ACC courses while in high school	+	-
	Ordered and submitted a transcript to a postsecondary institution	+	-
Perception of High School Preparation	Student feels well prepared for college and career goals	+	?

Data Set Limitations

This section provides more information on limitations mentioned briefly in Chapter 2.

Missing Data and Variables. As discussed above, significant amounts of missing data occurred due to incomplete provision of data from participating school districts. This resulted in missing or limited data for all Del Valle and Manor ISD students, non-consenting students in Austin and Leander ISDs and non-survey respondents. All of these problems have been or are currently being addressed for the Class of 2007.

The explanatory datasets contain all the independent variables used in the regression analyses and include survey data and school records. Since the construction of the explanatory datasets was driven by a desire for consistency across districts, many variables were eliminated because one or more districts chose not report them to RMC researchers. Any missing demographic, academic school records or survey information in an explanatory dataset resulted in individuals being dropped from the analysis.

Differences between Student Futures Project and AISD Datasets. Other limitations stem from differences in some procedures between Student Futures Project and AISD researchers and restrictions of the existing data-sharing agreement with AISD. The Austin ISD senior exit survey does not contain information on some variables of interest that are asked in the other districts, which resulted in somewhat different definitions of some key variables. For example, the Student Futures Project survey asked all students the education level of both their mother and father; those students who responded that neither parent had ever been to college were classified as first-generation students. However, the Austin ISD exit survey only asked students who indicated that they intended to go to college if they were the first person in their family to attend college. Thus, Austin ISD's version of this question limits the respondents to those who actually intend to go to college, reducing the number of students who responded to the question. Hence, Austin ISD reports on this topic may produce results different from those reflected in this report.

The current AISD data-sharing agreement restricts PEIMS variables provided to the Student Futures Project for non-consenting students. These restrictions mean that researchers cannot measure special education participation or identify specific high schools. The lack of Social Security numbers for non-consenting students precludes measurement of employment outcomes for those AISD students. There are also differences in the measurement of postsecondary education enrollment between the two projects (e.g., Student Futures Project use of UT enrollment records to supplement NSC data, AISD's use of Texas Higher Education Coordinating Board records). Possible modifications to the data-sharing agreement are currently being discussed with AISD.

Outcomes Data. Some limitations apply to both the measurement and timing of postsecondary education and employment outcomes.

Postsecondary Enrollment: Several issues limit this determination: some Texas colleges are not included in the NSC database; differences occurred in the timing of AISD and Student Futures Project links to the NSC database; and researchers could not link non-consenting AISD students to the UT Registrar database. Because NSC uses directory information and links using name and birth date instead of Social Security number, there are also differences in measured enrollments between this database and those reported by the Texas Higher Education Coordinating Board. A complete list of Texas institutions not included in NSC is presented below in Table A-4, along with the number of students enrolled in each institution as reported by the NSC in April 2007.

Table A-4: Texas Postsecondary Education Institutions not Included in NSC Data

School Name	Enrollment Size
University of Texas at Austin	50,377
University of North Texas	31,155
South Texas College	17,130
Laredo Community College	9,032
Texas A&M University - Corpus Christi	8,227
Lee College	5,954
Trinity Valley Community College	5,821
Angelina College	4,940
Texarkana College	4,228
Paris Junior College	4,212
Alvin Community College	3,932
University of Dallas	3,005
Texas Wesleyan University	2,742
Northeast Texas Community College	2,477
Lamar State College-Port Arthur	2,423
Galveston College	2,353
Remington College - Dallas Campus	2,074
Lamar State College-Orange	2,047
Lubbock Christian University-Undergraduate	1,974
Dallas Theological Seminary	1,870
Panola College	1,780
The Art Institute of Houston	1,710
College of Biblical Studies-Houston	1,492
The Art Institute of Dallas	1,418
Frank Phillips College	1,398
Western Technical Institute	1,202
Court Reporting Institute-Wheeler Institute of TX	1,124

Furthermore, outcomes in this report were based on students who were seniors in the Class of 2006, not graduates, due to incomplete data from one school district. Thus, students who did not graduate and returned the following year to high school are counted in this study as having not enrolled in postsecondary education, and are included in the denominator of students whose postsecondary activities were examined. Though this approach is consistently applied across school districts, those districts that have a higher rate of student retention and mobility (defined as students who left school to attend in another district) will have lower enrollment rates using NSC data.

Employment: Employment outcomes could only be determined for students who both possessed an SSN and provided that information to their school district. In Austin and Leander ISDs, SSNs were only available for consenters. Additionally, employment records were not available for students employed outside the state of Texas.

Timing: Due to a lag time in receiving outcomes data, initial postsecondary outcomes are limited to enrollment and employment through the fall semester after graduation for the Class of 2006. Postsecondary enrollment data from the NSC for the Summer 2006 and Fall 2006 semesters was obtained in April 2007. It was not possible to obtain detailed records from THECB within the timeframe available for this report. Time lags are also inherent in quarterly UI wage records. RMC researchers received 4th quarter 2006 employment data in June 2007.

Appendix B

Table B-1: Means and Distribution of Variables in Regression Models

		Enrollment Regressions		Employment Regressions		
		RS1	RS2	RS3	RS4	
		7393	3800	4206	1642	
Demographics	Native American	0.00	0.00	0.00	0.00	
	Asian	0.05	0.04	0.07	0.05	
	Black	0.13	0.12	0.14	0.13	
	Hispanic	0.32	0.38	0.24	0.33	
	White*	0.49	0.46	0.55	0.49	
	Unusually young	0.04	0.01	0.06	0.03	
	Neither unusually young nor old*	0.92	0.96	0.91	0.96	
	Unusually old	0.04	0.02	0.03	0.02	
	Low income	0.29	0.32	0.24	0.28	
Coursework	High school credit foreign language in 8th grade	0.34	0.39	0.34	0.38	
	High school credit algebra in 8th grade	0.18	0.19	0.20	0.23	
	Retained in 9th grade	0.03	0.01	0.04	0.01	
	Total high school math credits	3.38	3.40	3.41	3.38	
	Total high school AP and/or IB credits	1.68	1.88	1.84	2.02	
High School Attendance Senior Year	Austin ISD (Johnston/Reagan/Travis)	0.09	0.13	0.04	0.09	
	Austin ISD (Akins/Crockett/Lanier)	0.16	0.24	0.09	0.22	
	Austin ISD (Garza/LBJ/McCallum)*	0.11	0.17	0.06	0.13	
	Austin ISD (Anderson/Austin/Bowie)	0.20	0.33	0.11	0.26	
	Pflugerville ISD	0.12	0.04	0.20	0.08	
	Round Rock ISD	0.29	0.05	0.45	0.10	
	Leander ISD	0.03	0.05	0.06	0.11	
Family Background	First-generation college student		0.34		0.31	
	Mother completed at least a bachelor's		0.33		0.34	
	Parents encouraged postsecondary education a great deal*		0.78		0.78	
	Parents encouraged postsecondary education somewhat		0.17		0.17	
	Parents encouraged postsecondary education not very much		0.03		0.03	
	Parents encouraged postsecondary education not at all		0.02		0.02	
	Student first thought about college as long as could remember*		0.41		0.45	
	Student first thought about college as an option as a child		0.13		0.13	
	Student first thought about college as an option in middle/junior high		0.23		0.21	
	Student first thought about college as an option in high school		0.20		0.19	
	Student never thought about college as an option		0.02		0.02	
	Extra-Curricular Activities	School Related	Music		0.26	
Theater/drama				0.12		0.12
Dance				0.13		0.13
Sports				0.48		0.48
UIL academic competitions				0.12		0.12
Journalism				0.10		0.11
Speech/debate				0.07		0.06

Appendix B (continued)

Table B-1: Means and Distribution of Variables in Regression Models

		Enrollment Regressions		Employment Regressions	
		RS1	RS2	RS3	RS4
		7393	3800	4206	1642
Extra-Curricular Activities	Not School-Related	Sports		0.32	0.31
		Arts/music/performance		0.23	0.21
		Community service		0.46	0.46
		Environmental projects/activities		0.13	0.13
		Other		0.23	0.22
		Provided routine care for family members		0.29	0.26
	Study Habits	None		0.12	0.12
		1-5 hours per week *		0.56	0.57
		6-10 hours per week		0.22	0.20
		11-15 hours per week		0.07	0.07
		16 or more hours per week		0.04	0.04
		1-5 hours per week during senior year		0.12	0.11
	Work Habits	6-10 hours per week during senior year		0.08	0.08
		11-15 hours per week during senior year		0.12	0.13
		16 or more hours per week during senior year*		0.35	0.37
		None		0.33	0.31
Counselor Interactions	Scheduling		0.83	0.82	
	Building resumes/writing college essays		0.11	0.11	
	Course selection/placement		0.61	0.61	
	Financial aid information/application		0.18	0.19	
	Scholarship information/application		0.23	0.24	
	Conflict resolution		0.11	0.10	
	Graduation plans		0.52	0.51	
	Personal and/or family issues		0.11	0.12	
	High school 4-year plan		0.24	0.25	
	Parent conference		0.08	0.07	
	Graduation credit verification		0.39	0.37	
	Teacher conference		0.05	0.05	
	Testing interpretation		0.14	0.11	
	Career information		0.15	0.15	
College information/applications		0.40	0.43		
College Preparation Activities	Took AP/IB courses		0.49	0.53	
	Visited one or more college campus(es)		0.57	0.59	
	Completed Distinguished Achievement Program		0.21	0.24	
	Completed Recommended High School Program		0.40	0.45	
	Completed and submitted a FAFSA		0.41	0.43	
	Completed and submitted a scholarship application		0.35	0.37	
	Took the PSAT exam		0.60	0.63	
	Took college entrance tests		0.68	0.71	
	Completed ACC courses while in high school		0.24	0.23	
	Ordered and submitted a transcript to a postsecondary institution		0.47	0.49	
Perception of High School Preparation	Very well or well prepared for college and career goals		0.41	0.45	
	Somewhat well prepared for college and career goals*		0.46	0.44	
	Not at all well or not very well prepared for college and career goals		0.12	0.12	

* These variables were omitted in all regression models.

Appendix B (continued)

Table B-2: A Comparison of Statistical Models Used to Measure Enrollment in 4 Year Colleges

		RS1	RS2			
		School Records	School Records (SR)	SR plus Survey Data (SD)	SR, SD, plus School Groups	
Model Information	Number of individuals in model	7393	3800	3800	3800	
	Model intercept	.262 **	.185 **	.050	.091 *	
Category	Variable Description					
Demographics	Native American	-.040	-.133	.029	.003	
	Asian	-.008	.006	.068	.069	
	Black	.000	.017	.026	.033	
	Hispanic	-.077 **	-.114 **	-.055 **	-.043 *	
	Unusually young	.006	-.004	-.005	-.050	
	Unusually old	-.091 **	-.121 **	-.058	-.065 *	
	Gender (1=Male)	-.007	-.034 *	-.012	-.016	
	Low income	-.072 **	-.102 **	-.062 **	-.042 *	
Coursework	High school credit foreign language in 8th grade	.070 **	.066 **	.034 *	.028	
	High school credit algebra in 8th grade	-.017	.013	-.031	-.012	
	Retained in 9th grade	-.009	-.074	-.003	-.001	
	Total high school math credits	-.005	.036 **	.026 **	.015	
	Total high school AP and/or IB credits	.028 **	.035 **	.010	.007	
High School Attendance Senior Year	First-generation college student			.024	.023	
	Mother completed at least a bachelor's			.056 **	.036	
	Parents encouraged postsecondary education somewhat			-.036 *	-.031	
	Parents encouraged postsecondary education not very much			-.084 **	-.078 *	
	Parents encouraged postsecondary education not at all			-.044	-.040	
	Student first thought about college as an option as a child			-.052 *	-.052 *	
	Student first thought about college as an option in middle/junior high			-.007	-.006	
	Student first thought about college as an option in high school			-.029	-.026	
	Student never thought about college as an option			-.029	-.036	
Extra-Curricular Activities	School-Related	Music			-.012	-.012
		Theater/drama			.030	.030
		Dance			.033	.033
		Sports			.068 **	.071 **
		UIL academic competitions			-.019	-.011
		Journalism			-.007	-.003
		Speech/debate			-.004	-.010
	Not School-Related	Sports			.042 *	.034 *
		Arts/music/performance			-.015	-.020
		Community service			.017	.016
		Environmental project/activities			-.040	-.037
		Other			.028	.019
		Provided routine care for family members			-.012	-.015

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-2: A Comparison of Statistical Models Used to Measure Enrollment in 4 Year Colleges (continued)

			RS1	RS2		
			School Records	School Records (SR)	SR plus Survey Data (SD)	SR, SD, plus School Groups
Model Information		Number of individuals in model	7393	3800	3800	3800
		Model intercept	.262 **	.185 **	.050	.091 *
Extra Curricular Activities	Study Habits	None			-.030	-.034
		6-10 hours per week			-.033	-.030
		11-15 hours per week			-.023	-.018
		16 or more hours per week			-.036	-.030
	Work Habits	1-5 hours per week during senior year			.046 *	.035
		6-10 hours per week during senior year			.012	.015
		11-15 hours per week during senior year			.018	.019
		None			.004	.004
Counselor Interactions		Scheduling			-.016	-.018
		Building resumes/writing college essays			.031	.025
		Course selection/placement			-.004	-.010
		Financial aid information/application			.008	.008
		Scholarship information/application			-.014	-.004
		Conflict resolution			-.022	-.021
		Graduation plans			-.018	-.022
		Personal and/or family issues			-.019	-.023
		High school 4-year plan			.003	.013
		Parent conference			-.012	-.011
		Graduation credit verification			-.009	-.013
		Teacher conference			.009	.008
		Testing interpretation			-.016	-.021
		Career information			-.026	-.029
	College information/applications			.002	-.007	
College Preparation Activities		Took AP/IB courses			.017	.024
		Visited one or more college campus(es)			.050 **	.052 **
		Completed Distinguished Achievement Program			-.012	-.008
		Completed Recommended High School Program			.036 *	.045 **
		Completed and submitted a FAFSA			.053 **	.058 **
		Completed and submitted a scholarship application			.020	.028
		Took the PSAT exam			.029	.029
		Took college entrance tests			.080 **	.074 **
		Completed ACC courses while in high school			-.052 **	-.048 **
		Ordered and submitted a transcript to a postsecondary institution			.111 **	.099 **
Perception of High School Preparation		Very well or well prepared for college and career goals			-.030 *	-.017
		Not at all well or not very well prepared for college and career goals			-.030	-.025
High School of Attendance Senior Year		Austin ISD (Johnston/Reagan/Travis)				-.055 *
		Austin ISD (Akins/Crockett/Lanier)				-.048 *
		Austin ISD (Anderson/Austin/Bowie)				.071 **
		Pflugerville ISD				.025
		Round Rock ISD				-.100 *
		Leander ISD				-.104 *

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-3: A Comparison of Statistical Models Used to Measure Enrollment in 2 Year Colleges

		RS1	RS2			
		School Records	School Records (SR)	SR plus Survey Data (SD)	SR, SD plus School Groups	
Model Information	Number of individuals in model	7393	3800	3800	3800	
	Model intercept	.180 **	.248 **	.286 **	.340 **	
Category	Variable Description					
Demographics	Native American	-.087	-.031	-.056	-.073	
	Asian	.002	.037	.009	.009	
	Black	-.041 **	-.026	-.024	-.014	
	Hispanic	-.016	.000	-.006	.009	
	Unusually young	-.001	.017	-.006	.012	
	Unusually old	-.105 **	-.140 **	-.146 **	-.134 **	
	Gender (1=Male)	.004	.028 *	.022	.019	
	Low income	-.039 **	-.062 **	-.067 **	-.048 **	
Coursework	High school credit foreign language in 8th grade	.008	.006	.004	-.006	
	High school credit algebra in 8th grade	-.028 *	-.047 **	-.028	-.015	
	Retained in 9th grade	-.066 **	-.125 **	-.140 **	-.129 **	
	Total high school math credits	.012 **	.002	.004	-.005	
	Total high school AP and/or IB credits	-.015 **	-.026 **	-.017 **	-.017 **	
Family Background	First-generation college student			-.029	-.027	
	Mother completed at least a bachelor's			-.054 **	-.066 **	
	Parents encouraged postsecondary education somewhat			-.054 **	-.052 **	
	Parents encouraged postsecondary education not very much			-.036	-.036	
	Parents encouraged postsecondary education not at all			-.032	-.028	
	Student first thought about college as an option as a child			.050 *	.050 *	
	Student first thought about college as an option in middle/junior high			.015	.020	
	Student first thought about college as an option in high school			.018	.019	
	Student never thought about college as an option			-.076	-.075	
Extra-Curricular Activities	School-Related	Music			.009	.010
		Theater/drama			-.005	-.006
		Dance			.002	-.003
		Sports			-.030 *	-.027
		UIL academic competitions			.031	.036
		Journalism			-.040 *	-.027
		Speech/debate			.011	.006
	Not School-Related	Sports			-.003	-.007
		Arts/music/performance			.005	-.003
		Community service			-.009	-.012
		Environmental project/activities			.034	.038 *
		Other			-.008	-.015
		Provided routine care for family members			-.019	-.023

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-3: A Comparison of Statistical Models Used to Measure Enrollment in 2 Year Colleges (continued)

			RS1	RS2		
			School Records	School Records (SR)	SR plus Survey Data (SD)	SR, SD plus School Groups
Model Information	Number of individuals in model		7393	3800	3800	3800
	Model intercept		.180 **	.248 **	.286 **	.340 **
Extra Curricular Activities	Study Habits	None			.008	.001
		6-10 hours per week			-.003	-.002
		11-15 hours per week			-.004	-.005
		16 or more hours per week			-.012	-.010
	Work Habits	1-5 hours per week during senior year			-.034	-.039
		6-10 hours per week during senior year			.019	.023
		11-15 hours per week during senior year			.008	.013
		None			.013	.016
Counselor Interactions	Scheduling				-.015	-.014
	Building resumes/writing college essays				-.021	-.025
	Course selection/placement				.037 **	.030 *
	Financial aid information/application				.056 **	.055 **
	Scholarship information/application				-.030	-.025
	Conflict resolution				.039	.039
	Graduation plans				.011	.008
	Personal and/or family issues				-.034	-.038
	High school 4-year plan				-.038 *	-.029
	Parent conference				.031	.032
	Graduation credit verification				.002	-.001
	Teacher conference				-.008	-.005
	Testing interpretation				.002	.001
	Career information				.052 *	.048 *
College information/applications				-.023	-.027	
College Preparation Activities	Took AP/IB courses				.005	.010
	Visited one or more college campus(es)				-.043 **	-.041 *
	Completed Distinguished Achievement Program				-.021	-.022
	Completed Recommended High School Program				-.006	.000
	Completed and submitted a FAFSA				.009	.010
	Completed and submitted a scholarship application				-.058 **	-.053 **
	Took the PSAT exam				.001	.002
	Took college entrance tests				.077 **	.075 **
	Completed ACC courses while in high school				-.007	-.003
Ordered and submitted a transcript to a postsecondary institution				-.049 **	-.060 **	
Perception of High School Preparation	Very well or well prepared for college and career goals				-.014	-.005
	Not at all well or not very well prepared for college and career goals				.023	.024
High School of Attendance Senior Year	Austin ISD (Johnston/Reagan/Travis)					-.133 **
	Austin ISD (Akins/Crockett/Lanier)					-.031
	Austin ISD (Anderson/Austin/Bowie)					.012
	Pflugerville ISD					-.078
	Round Rock ISD					-.057
	Leander ISD					-.101 **

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-4: Factors Related to Enrollment in 4 and 2 Year Postsecondary Education

		RS2				
		Enroll 4 Year	Enroll 2 Year			
Model Information						
		Number of individuals in model				
		3800	3800			
		Model intercept				
		0.05	0.286 **			
Category	Variable Description					
Demographics	Native American			.029	-.056	
	Asian			.068	.009	
	Black			.026	-.024	
	Hispanic			-.055 **	-.006	
	Unusually young			-.005	-.006	
	Unusually old			-.058	-.146 **	
	Gender (1=Male)			-.012	.022	
	Low income			-.062 **	-.067 **	
Coursework	High school credit foreign language in 8th grade			.034 *	.004	
	High school credit algebra in 8th grade			-.031	-.028	
	Retained in 9th grade			-.003	-.140 **	
	Total high school math credits			.026 **	.004	
	Total high school AP and/or IB credits			.010	-.017 **	
Family Background	First-generation college student			.024	-.029	
	Mother completed at least a bachelor's			.056 **	-.054 **	
	Parents encouraged postsecondary education somewhat			-.036 *	-.054 **	
	Parents encouraged postsecondary education not very much			-.084 **	-.036	
	Parents encouraged postsecondary education not at all			-.044	-.032	
	Student first thought about college as an option as a child			-.052 *	.050 *	
	Student first thought about college as an option in middle/junior high			-.007	.015	
	Student first thought about college as an option in high school			-.029	.018	
	Student never thought about college as an option			-.029	-.076	
Extra-Curricular Activities	School-Related	Music			-.012	.009
		Theater/drama			.030	-.005
		Dance			.033	.002
		Sports			.068 **	-.030 *
		UIL academic competitions			-.019	.031
		Journalism			-.007	-.040 *
		Speech/debate			-.004	.011
	Not School-Related	Sports			.042 *	-.003
		Arts/music/performance			-.015	.005
		Community service			.017	-.009
		Environmental project/activities			-.040	.034
		Other			.028	-.008
		Provided routine care for family members			-.012	-.019

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-4: Factors Related to Enrollment in 4 and 2 Year
Postsecondary Education
(continued)**

			RS2	
			Enroll 4 Year	Enroll 4 Year
Model Information		Number of individuals in model	3800	3800
		Model intercept	0.05	0.286**
Category		Variable Description		
Extra-Curricular Activities	Study Habits	None	-.030	.008
		6-10 hours per week	-.033	-.003
		11-15 hours per week	-.023	-.004
		16 or more hours per week	-.036	-.012
	Work Habits	1-5 hours per week during senior year	.046*	-.034
		6-10 hours per week during senior year	.012	.019
		11-15 hours per week during senior year	.018	.008
		None	.004	.013
Counselor Interactions		Scheduling	-.016	-.015
		Building resumes/writing college essays	.031	-.021
		Course selection/placement	-.004	.037**
		Financial aid information/application	.008	.056**
		Scholarship information/application	-.014	-.030
		Conflict resolution	-.022	.039
		Graduation plans	-.018	.011
		Personal and/or family issues	-.019	-.034
		High school 4-year plan	.003	-.038*
		Parent conference	-.012	.031
		Graduation credit verification	-.009	.002
		Teacher conference	.009	-.008
		Testing interpretation	-.016	.002
		Career information	-.026	.052*
College information/applications	.002	-.023		
College Preparation Activities		Took AP/IB courses	.017	.005
		Visited one or more college campus(es)	.050**	-.043**
		Completed Distinguished Achievement Program	-.012	-.021
		Completed Recommended High School Program	.036*	-.006
		Completed and submitted a FAFSA	.053**	.009
		Completed and submitted a scholarship application	.020	-.058**
		Took the PSAT exam	.029	.001
		Took college entrance tests	.080**	.077**
		Completed ACC courses while in high school	-.052**	-.007
		Ordered and submitted a transcript to a postsecondary institution	.111**	-.049**
Perception of High School Preparation		Very well or well prepared for college and career goals	-.030*	-.014
		Not at all well or not very well prepared for college and career goals	-.030	.023

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-5: Factors Related to 4 Year Postsecondary Enrollment by Ethnicity

		Enroll 4 Year (from RS2)			
		Black	Hispanic	White	
Model Information	Number of individuals in model	445	1442	1758	
	Model intercept	.128	.069	.002	
Category	Variable Description				
Demographics	Unusually young	-.022	.094	-.046	
	Unusually old	-.036	-.034	-.164	
	Gender (1=Male)	.031	-.024	-.020	
	Low income	-.138 **	-.042 *	-.050	
Coursework	High school credit foreign language in 8th grade	.112 *	.053 *	.005	
	High school credit algebra in 8th grade	-.139	-.006	-.035	
	Retained in 9th grade	-.143	-.020	.211	
	Total high school math credits	.023	.012	.037 *	
	Total high school AP and/or IB credits	.033	.021 *	.002	
Family Background	First-generation college student	.065	-.015	.046	
	Mother completed at least a bachelor's	-.049	-.011	.114 **	
	Parents encouraged postsecondary education somewhat	.069	-.036	-.073 *	
	Parents encouraged postsecondary education not very much	.040	-.025	-.150 **	
	Parents encouraged postsecondary education not at all	.054	-.041	-.141 *	
	Student first thought about college as an option as a child	-.132 *	-.069 *	-.029	
	Student first thought about college as an option in middle/junior high	-.009	-.010	.007	
	Student first thought about college as an option in high school	-.048	-.022	-.009	
	Student never thought about college as an option	-.194	-.036	-.005	
Extra-Curricular Activities	School-Related	Music	.033	.017	-.037
		Theater/drama	.006	.073	.016
		Dance	.132 *	.015	.007
		Sports	.061	.074 **	.069 **
		UIL academic competitions	-.107	-.037	-.022
		Journalism	.080	-.018	-.048
		Speech/debate	.016	-.053	.026
	Not School-Related	Sports	-.058	.072 **	.024
		Arts/music/performance	.010	.016	-.041
		Community service	.089	-.005	.011
		Environmental project/activities	-.111	-.062	-.014
		Other	.030	.012	.035
		Provided routine care for family members	-.086 *	-.003	-.017

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-5: Factors Related to 4 Year Postsecondary Enrollment by Ethnicity
(continued)**

			Enroll 4 Year (from RS2)		
			Black	Hispanic	White
Model Information		Number of individuals in model	445	1442	1758
		Model intercept	.128	.069	.002
Extra-Curricular Activities	Study Habits	None	-.085	-.010	-.031
		6-10 hours per week	.014	-.032	-.035
		11-15 hours per week	-.055	-.006	.016
		16 or more hours per week	-.118	-.025	.008
	Work Habits	1-5 hours per week during senior year	-.139	.027	.116 **
		6-10 hours per week during senior year	.068	-.013	.039
		11-15 hours per week during senior year	-.006	.026	.025
		None	-.073	-.018	.050
Counselor Interactions		Scheduling	.020	-.027	-.010
		Building resumes/writing college essays	.052	.062	.004
		Course selection/placement	-.014	.010	-.014
		Financial aid information/application	-.025	-.022	.039
		Scholarship information/application	-.028	-.021	.003
		Conflict resolution	.071	-.041	-.020
		Graduation plans	-.022	-.015	-.012
		Personal and/or family issues	-.113	-.007	.004
		High school 4-year plan	-.075	.061 *	-.006
		Parent conference	-.120	-.025	.015
		Graduation credit verification	.001	-.030	-.037
		Teacher conference	.071	.022	-.018
		Testing interpretation	-.020	-.039	-.012
		Career information	-.001	-.011	-.041
College information/applications	-.077	.014	.010		
College Preparation Activities		Took AP/IB courses	.008	.001	.023
		Visited one or more college campus(es)	.061	.014	.078 **
		Completed Distinguished Achievement Program	-.075	-.009	-.007
		Completed Recommended High School Program	-.028	.030	.039
		Completed and submitted a FAFSA	.183 **	-.005	.068 *
		Completed and submitted a scholarship application	.181 **	.063	-.026
		Took the PSAT exam	.028	.048	-.005
		Took college entrance tests	-.001	.049 *	.117 **
		Completed ACC courses while in high school	-.053	.023	-.099 **
Perception of High School Preparation		Very well or well prepared for college and career goals	.002	-.017	-.060 *
		Not at all well or not very well prepared for college and career goals	-.004	-.030	-.030

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-6: Factors Related to 2 Year Postsecondary Enrollment by Ethnicity

		Enroll 2 Year (from RS2)			
		Black	Hispanic	White	
Model Information	Number of individuals in model	445	1442	1758	
	Model intercept	.150	.333 **	.318 **	
Category	Variable Description				
Demographics	Unusually young	-.030	.015	-.108	
	Unusually old	-.135	-.147 **	.021	
	Gender (1=Male)	.013	.017	.014	
	Low income	-.003	-.080 **	-.026	
Coursework	High school credit foreign language in 8th grade	.020	.009	-.015	
	High school credit algebra in 8th grade	-.050	-.043	-.028	
	Retained in 9th grade	-.189 **	-.126 *	-.117	
	Total high school math credits	-.008	-.008	.008	
	Total high school AP and/or IB credits	-.010	-.004	-.019 **	
Family Background	First-generation college student	-.047	-.036	.024	
	Mother completed at least a bachelor's	.037	-.054	-.031	
	Parents encouraged postsecondary education somewhat	-.153 **	-.055 *	-.044	
	Parents encouraged postsecondary education not very much	-.020	-.072	-.016	
	Parents encouraged postsecondary education not at all	-.063	-.009	-.028	
	Student first thought about college as an option as a child	.120	.122 **	-.038	
	Student first thought about college as an option in middle/junior high	.052	.017	.019	
	Student first thought about college as an option in high school	.056	.014	.003	
	Student never thought about college as an option	.063	-.057	-.112	
Extra-Curricular Activities	School-Related	Music	.051	.000	.010
		Theater/drama	-.065	-.006	-.009
		Dance	-.071	-.007	.043
		Sports	-.021	-.021	-.047 *
		UIL academic competitions	.198 *	.047	.015
	Not School-Related	Journalism	-.074	-.056	-.027
		Speech/debate	.111	.066	-.045
		Sports	.049	-.029	.019
		Arts/music/performance	.003	-.009	.002
		Community service	.041	.011	-.037
		Environmental project/activities	.019	.057	.035
		Other	-.076	-.019	.000
		Provided routine care for family members	.010	-.042 *	.024

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-6: Factors Related to 2 Year Postsecondary Enrollment by Ethnicity
(continued)**

			Enroll 2 Year (from RS2)		
			Black	Hispanic	White
Model Information		Number of individuals in model	445	1442	1758
		Model intercept	.150	.333 **	.318 **
Extra-Curricular Activities	Study Habits	None	.101	.036	-.031
		6-10 hours per week	.021	-.006	-.011
		11-15 hours per week	.114	-.023	.004
		16 or more hours per week	.122	-.032	-.032
	Work Habits	1-5 hours per week during senior year	-.025	-.044	-.011
		6-10 hours per week during senior year	.002	-.005	.056
		11-15 hours per week during senior year	-.040	-.012	.021
		None	.017	.007	.023
Counselor Interactions		Scheduling	-.019	-.031	.004
		Building resumes/writing college essays	-.049	-.004	-.023
		Course selection/placement	.068	.066 **	-.004
		Financial aid information/application	.110	.071	.019
		Scholarship information/application	-.080	-.054	-.018
		Conflict resolution	-.035	.013	.068
		Graduation plans	-.010	.006	.018
		Personal and/or family issues	.011	-.053	-.054
		High school 4-year plan	-.089 *	-.039	-.012
		Parent conference	.095	.007	.022
		Graduation credit verification	-.010	-.019	.039
		Teacher conference	.002	-.036	.019
		Testing interpretation	.032	-.021	.020
		Career information	.101	.063	.014
College information/applications	.004	.006	-.031		
College Preparation Activities		Took AP/IB courses	.137 *	-.005	.002
		Visited one or more college campus(es)	-.076	-.019	-.074 **
		Completed Distinguished Achievement Program	.052	-.044	-.021
		Completed Recommended High School Program	.056	-.018	-.018
		Completed and submitted a FAFSA	.041	.039	-.037
		Completed and submitted a scholarship application	-.136 *	-.098 **	-.014
		Took the PSAT exam	.055	-.002	-.026
		Took college entrance tests	.041	.103 **	.070
		Completed ACC courses while in high school	-.044	-.064 *	.028
Perception of High School Preparation		Very well or well prepared for college and career goals	-.025	-.028	.014
		Not at all well or not very well prepared for college and career goals	-.001	-.030	.063 *

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-7: Factors Related to Postsecondary Enrollment by First Generation Status

		Enroll 4 Year (from RS2)		Enroll 2 Year (from RS2)		
		First Generation	Not 1st Generation	First Generation	Not 1st Generation	
Model Information	Number of individuals in model	1302	2498	1302	2498	
	Model intercept	.179 **	.007	.241 **	.307 **	
Category	Variable Description					
Demographics	Native American	-.181 *	.169	-.231 **	.01	
	Asian	.136	.054	-.096	.024	
	Black	.08	-.001	-.111 **	-.005	
	Hispanic	-.058	-.044	-.047	.004	
	Unusually young	-.13	.007	-.071	.03	
	Unusually old	-.045	-.053	-.149 **	-.13 *	
	Gender (1=Male)	0	-.015	.007	.021	
	Low income	-.016	-.103 **	-.088 **	-.051 *	
Coursework	High school credit foreign language in 8th grade	.007	.045 *	.012	.001	
	High school credit algebra in 8th grade	-.013	-.038	-.011	-.029	
	Retained in 9th grade	.008	.022	-.172 **	-.111	
	Total high school math credits	.009	.032 **	.002	.009	
	Total high school AP and/or IB credits	.039 **	.001	-.017 *	-.018 **	
Family Background	Mother completed at least a bachelor's	(dropped)	.059 **	(dropped)	-.044 *	
	Parents encouraged postsecondary education somewhat	-.046 *	-.034	-.02	-.077 **	
	Parents encouraged postsecondary education not very much	-.106 *	-.06	-.065	-.023	
	Parents encouraged postsecondary education not at all	.021	-.116 **	0	-.069	
	Student first thought about college as an option as a child	-.099 **	-.037	.073 *	.033	
	Student first thought about college as an option in middle/junior high	-.064 *	.026	-.004	.027	
	Student first thought about college as an option in high school	-.077 *	-.005	.044	-.001	
	Student never thought about college as an option	-.055	-.014	-.064	-.081	
Extra-Curricular Activities	School-Related	Music	-.018	-.007	.018	0
		Theater/drama	-.043	.044	.083	-.025
		Dance	.016	.049	.034	-.017
		Sports	.057 *	.077 **	-.038	-.027
		UIL academic competitions	-.076	.002	.073	.025
		Journalism	-.001	-.013	-.016	-.048 *
		Speech/debate	.072	-.038	-.001	.017
	Not School-Related	Sports	.032	.043 *	.035	-.021
		Arts/music/performance	.008	-.034	-.017	.014
		Community service	.031	.005	-.012	-.012
		Environmental project/activities	-.094 *	-.024	0.04	.03
		Other	.026	.028	.011	-.015
		Provided routine care for family members	-.027	.004	-.024	-.017

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-7: Factors Related to Postsecondary Enrollment by First Generation Status
(continued)**

		Enroll 4 Year (from RS2)		Enroll 2 Year (from RS2)		
		First Generation	Not 1st Generation	First Generation	Not 1st Generation	
Model Information	Number of individuals in model	1302	2498	1302	2498	
	Model intercept	.179 **	.007	.241 **	.307 **	
Extra-Curricular Activities	Study Habits	None	-.033	-.024	.044	-.013
		6-10 hours per week	-.033	-.035	.027	-.018
		11-15 hours per week	-.011	-.023	-.01	-.006
		16 or more hours per week	-.058	-.014	-.011	-.016
	Work Habits	1-5 hours per week during senior year	.017	.07 *	.026	-.054 *
		6-10 hours per week during senior year	-.024	.037	.095 *	-.008
		11-15 hours per week during senior year	0	.025	.037	-.009
	None	-.018	.024	.042	-.001	
Counselor Interactions	Scheduling	-.029	-.012	-.035	.001	
	Building resumes/writing college essays	.077	.022	-.036	-.006	
	Course selection/placement	-.02	.004	.061 *	.021	
	Financial aid information/application	-.036	.023	.08	.041	
	Scholarship information/application	.002	-.012	-.064	-.016	
	Conflict resolution	-.024	-.012	.048	.024	
	Graduation plans	-.015	-.021	.003	.018	
	Personal and/or family issues	-.012	-.023	-.073 *	-.013	
	High school 4-year plan	.034	-.012	-.031	-.036	
	Parent conference	-.036	-.001	.049	.014	
	Graduation credit verification	-.002	-.013	-.011	.012	
	Teacher conference	.006	.017	-.016	-.004	
	Testing interpretation	-.04	-.002	-.022	.012	
	Career information	-.04	-.016	.033	.058 *	
College information/applications	.009	-.004	.007	-.031		
College Preparation Activities	Took AP/IB courses	-.035	.046	.031	-.008	
	Visited one or more college campus(es)	-.004	.08 **	-.052 *	-.04	
	Completed Distinguished Achievement Program	-.059	.002	-.052	-.009	
	Completed Recommended High School Program	.044	.028	.047	-.028	
	Completed and submitted a FAFSA	.041	.055 *	.057	-.009	
	Completed and submitted a scholarship application	.092 *	-.009	-.086 *	-.051 *	
	Took the PSAT exam	.068 *	-.003	-.048	.032	
	Took college entrance tests	.035	.095 **	.096 **	.056 *	
	Completed ACC courses while in high school	.026	-.092 **	-.028	.002	
	Ordered and submitted a transcript to a postsecondary institution	.081 *	.128 **	-.03	-.061 **	
Perception of High School Preparation	Very well or well prepared for college and career goals	-.016	-.036	.001	-.02	
	Not at all well or not very well prepared for college and career goals	-.023	-.032	.022	.021	

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-8: A Comparison of Statistical Models
Used to Measure Employment**

		RS3	RS4		
		School Records	School Records (SR)	SR plus Survey Data	
Model Information	Number of individuals in model	4206	1642	1642	
	Model intercept	.625 **	.541 **	.670 **	
Category	Variable Description				
Demographics	Native American	.052	.649**	.401 **	
	Asian	-.055	-.067	-.046	
	Black	.018	.075	.058	
	Hispanic	.119 **	.117**	.086 **	
	Unusually young	.016	.025	.033	
	Unusually old	-.027	-.094	-.057	
	Gender (1=Male)	-.028	-.017	-.014	
	Low income	-.005	-.009	-.055	
Coursework	High school credit foreign language in 8th grade	-.013	-.021	-.005	
	High school credit algebra in 8th grade	-.060 **	-.031	-.025	
	Retained in 9th grade	-.030	-.055	-.073	
	Total high school math credits	-.007	.015	.017	
	Total high school AP and/or IB credits	-.042 **	-.046**	-.021 **	
Family Background	First-generation college student			.031	
	Mother completed at least a bachelor's			-.081 **	
	Parents encouraged postsecondary education somewhat			.069 *	
	Parents encouraged postsecondary education not very much			.023	
	Parents encouraged postsecondary education not at all			.077	
	Student first thought about college as an option as a child			.029	
	Student first thought about college as an option in middle/junior high			.017	
	Student first thought about college as an option in high school			.044	
	Student never thought about college as an option			.121	
Extra-Curricular Activities	School-Related	Music			-.011
		Theater/drama			.074
		Dance			.074 *
		Sports			-.047
		UIL academic competitions			-.079 *
		Journalism			.007
		Speech/debate			-.005
	Not School-Related	Sports			.039
		Arts/music/performance			-.026
		Community service			-.021
		Environmental project/activities			.022
		Other			-.030
		Provided routine care for family members			-.018

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-8: A Comparison of Statistical Models Used to Measure Employment
(continued)**

			RS3	RS4	
			School Records	School Records (SR)	SR plus Survey Data
Model Information	Number of individuals in model		4206	1642	1642
	Model intercept		.625 **	.541 **	.670 **
Extra-Curricular Activities	Study Habits	None			-.031
		6-10 hours per week			.022
		11-15 hours per week			-.006
		16 or more hours per week			.017
	Work Habits	1-5 hours per week during senior year			-.218 **
		6-10 hours per week during senior year			-.079
		11-15 hours per week during senior year			-.096 *
		None			-.223 **
Counselor Interactions	Scheduling				.027
	Building resumes/writing college essays				.036
	Course selection/placement				-.026
	Financial aid information/application				.013
	Scholarship information/application				-.012
	Conflict resolution				.056
	Graduation plans				-.003
	Personal and/or family issues				.047
	High school 4-year plan				.004
	Parent conference				.015
	Graduation credit verification				-.011
	Teacher conference				.069
	Testing interpretation				-.011
	Career information				-.026
College information/applications				.018	
College Preparation Activities	Took AP/IB courses				.043
	Visited one or more college campus(es)				-.064 *
	Completed Distinguished Achievement Program				-.013
	Completed Recommended High School Program				.017
	Completed and submitted a FAFSA				-.015
	Completed and submitted a scholarship application				.015
	Took the PSAT exam				-.023
	Took college entrance tests				-.052
	Completed ACC courses while in high school				.017
	Ordered and submitted a transcript to a postsecondary institution				-.036
Perception of High School Preparation	Very well or well prepared for college and career goals				.006
	Not at all well or not very well prepared for college and career goals				.021

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

Table B-9: Factors Related to Student Postsecondary Employment and Enrollment

		RS4			
		Employed (Regardless of enrollment)	Employed AND Enrolled	Employed NOT Enrolled	
Model Information	Number of individuals in model	1642	1642	1642	
	Model intercept	.670 **	.175 **	.495 **	
Category	Variable Description				
Demographics	Native American	.401 **	-.356 **	.757 **	
	Asian	-.046	.106	-.152 **	
	Black	.058	.016	.041	
	Hispanic	.086 **	.048	.037	
	Unusually young	.033	.098	-.065	
	Unusually old	-.057	-.124 *	.066	
	Gender (1=Male)	-.014	-.015	.001	
	Low income	-.055	-.080 **	.025	
Coursework	High school credit foreign language in 8th grade	-.005	.013	-.018	
	High school credit algebra in 8th grade	-.025	-.033	.008	
	Retained in 9th grade	-.073	-.215 **	.142	
	Total high school math credits	.017	.025	-.008	
	Total high school AP and/or IB credits	-.021 **	-.013 *	-.008	
Family Background	First-generation college student	.031	.017	.014	
	Mother completed at least a bachelor's	-.081 **	-.027	-.055 *	
	Parents encouraged postsecondary education somewhat	.069 *	-.004	.073 *	
	Parents encouraged postsecondary education not very much	.023	-.063	.086	
	Parents encouraged postsecondary education not at all	.077	-.090	.167 *	
	Student first thought about college as an option as a child	.029	.041	-.012	
	Student first thought about college as an option in middle/junior high	.017	-.007	.025	
	Student first thought about college as an option in high school	.044	.033	.010	
	Student never thought about college as an option	.121	-.056	.177 *	
Extra-Curricular Activities	School- Related	Music	-.011	-.017	.006
		Theater/drama	.074	.107 **	-.033
		Dance	.074 *	.056	.018
		Sports	-.047	.001	-.048
		UIL Academic competitions	-.079 *	-.031	-.049
		Journalism	.007	-.054	.061
		Speech/debate	-.005	.010	-.015
	Not School- Related	Sports	.039	.003	.036
		Arts/music/performance	-.026	.013	-.039
		Community service	-.021	-.036	.014
		Environmental project/activities	.022	-.004	.026
		Other	-.030	-.016	-.014
		Provided routine care for family members	-.018	-.031	.013

* Confidence level greater than 95%, ** Confidence level greater than 99%

Appendix B (continued)

**Table B-9: Factors Related to Student Postsecondary
Employment and Enrollment
(continued)**

		RS4			
		Employed (Regardless of enrollment)	Employed AND Enrolled	Employed NOT Enrolled	
Model Information	Number of individuals in model	1642	1642	1642	
	Model intercept	.670 **	.175 **	.495 **	
Extra-Curricular Activities	Study Habits	None	-.031	-.015	-.017
		6-10 hours per week	.022	.011	.011
		11-15 hours per week	-.006	-.013	.006
		16 or more hours per week	.017	-.019	.036
	Work Habits	1-5 hours per week during senior year	-.218 **	-.080 *	-.138 **
		6-10 hours per week during senior year	-.079	-.026	-.053
		11-15 hours per week during senior year	-.096 *	-.051	-.045
		None	-.223 **	-.109 **	-.114 **
Counselor Interactions	Scheduling	.027	-.018	.045	
	Building resumes/writing college essays	.036	-.006	.042	
	Course selection/placement	-.026	.033	-.059 *	
	Financial aid information/application	.013	.042	-.029	
	Scholarship information/application	-.012	-.042	.030	
	Conflict resolution	.056	.044	.012	
	Graduation plans	-.003	.032	-.035	
	Personal and/or family issues	.047	-.042	.089 *	
	High school 4-year plan	.004	-.009	.012	
	Parent conference	.015	.015	-.001	
	Graduation credit verification	-.011	-.004	-.006	
	Teacher conference	.069	.028	.042	
	Testing interpretation	-.011	-.022	.011	
College Preparation Activities	Took AP/IB courses	.043	.027	.016	
	Visited one or more college campuses	-.064 *	-.015	-.049	
	Completed Distinguished Achievement Program	-.013	-.048	.035	
	Completed Recommended High School Program	.017	-.005	.022	
	Completed and submitted a FAFSA	-.015	.017	-.032	
	Completed and submitted a scholarship application	.015	-.017	.032	
	Took the PSAT exam	-.023	.014	-.037	
	Took college entrance tests	-.052	.068 *	-.120 **	
	Completed ACC courses while in high school	.017	-.004	.021	
Ordered and submitted a transcript to a postsecondary institution	-.036	.035	-.072 **		
Perception of High School Preparation	Very well or well prepared for college and career goals	.006	-.009	.015	
	Not at all well or not very well prepared for college and career goals	.021	.042	-.021	

* Confidence level greater than 95%, ** Confidence level greater than 99%



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