

Central Texas High School Graduate Data Center: Year One Final Report

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Executive Summary

Globalization, technological innovation and the ongoing restructuring of work have created a “skills premium” for well-educated and trained workers in the U.S. and locally. Currently, Texas has the highest percentage of adults without high school diplomas of any state and is also experiencing major demographic shifts that may exacerbate this trend. There has never been a greater need for business and education to collaborate to prepare both current and emerging workers for success in their careers, starting with improved high school graduation rates and including higher rates of postsecondary education enrollment and completion. The Greater Austin Chamber of Commerce (GACC) and the Texas Education Agency (TEA) provided funding to Skillpoint Alliance (Skillpoint) and the Ray Marshall Center for the Study of Human Resources at the University of Texas Lyndon B. Johnson School of Public Affairs (Ray Marshall Center) to conduct research that could aid decision-making by local business and education officials and result in better education and labor market outcomes for local high school graduates. The Central Texas High School Graduate Data Center (Data Center) is being developed for that purpose. This report discusses findings, conclusions and recommendations based on the Data Center’s first year of work and describes plans for future research.

Central Texas High School Graduate Data Center Overview

The Data Center is a research partnership between the Ray Marshall Center, Skillpoint and a growing number of Central Texas independent school districts (ISDs). The Data Center’s purpose is two-fold:

- 1) To provide Central Texas independent school districts, colleges, universities and employers with a comprehensive, longitudinal view of what high school graduates are doing after high school and, most importantly, *why*; and
- 2) To foster evidence-based best practices through workshops, seminars and applied research, assisting the region’s ISDs, Education Service Center and postsecondary institutions in improving student achievement, instruction and school performance.

Once it is fully implemented, the Data Center will answer four major research questions for the region’s high school graduates each year:

- 1) Which graduates are participating in postsecondary education and why?
- 2) Which graduates are going to work and why?
- 3) Which graduates are both working and participating in postsecondary education?
- 4) Which graduates are participating in other postsecondary activities, such as joining the military, entering the prison system, or receiving welfare, and why?

These questions will be analyzed for Central Texas graduates as a whole and for key population groups of graduates. To determine both what young adults plan to do after high school and key influences on these outcomes, the Data Center will survey students just before they graduate from high school and again one year following their graduation. Students' educational and labor force progress will be followed for 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 local educators and business leaders so that they can use this information to improve their educational practices for future cohorts of high school students.

As defined in this project, Central Texas is comprised of Hays, Travis and Williamson counties and includes 22 school districts. The Data Center research components are being phased in over a two-year period and should be fully implemented by the end of the 2006 calendar year. Four ISDs — Austin, Del Valle, Pflugerville and Round Rock — participated in the Data Center project in 2005, working with researchers to pilot and test the survey instruments and presentation formats that will be used once all Data Center components are fully implemented. Additional ISDs will be invited to join in 2006, contingent upon additional funding.

In its first year of operation — January through December 2005 — the Data Center developed partnerships with the four participating ISDs; reviewed existing literature to identify likely background factors that contribute to successful post-high school outcomes; analyzed publicly available data to glean available information on some of those factors and rates of postsecondary enrollment for Central Texas graduates; piloted a survey of 2005 high school graduates from the participating school districts to identify key information on graduates' family backgrounds, high school activities and methods of college preparation that can not be determined from detailed school records; and developed a detailed statistical

analysis plan for the five-year project. The statistical approaches used in the first year have limitations that will be resolved once the Data Center's analysis plan is fully implemented.

Literature Review

In order to determine both what young adults plan to do after high school and key influences behind these choices, Data Center researchers undertook a review of existing literature on public secondary education and postsecondary transitions. The focus of the review was to identify critical background variables associated with positive and negative education and labor force outcomes. The studies reviewed identified many common characteristics that Data Center researchers grouped into the following overarching themes:

- Social background;
- Personal academic background;
- School variables;
- Community variables; and
- Postsecondary education variables.

These variables, which formed the foundation for both the Data Center's analysis of publicly available data and the development of the high school senior survey, are discussed in more detail in the full report.

Analysis of Publicly Available Data

Researchers analyzed three primary electronic data sources that are available to the public: data maintained by TEA in their Public Education Information Management System (PEIMS) and Academic Excellence Indicator System (AEIS), data maintained by the Texas Higher Education Coordinating Board's High School to College Linkages data system, and American Community Survey data from the U.S. Census Bureau. The analysis sought to determine the extent to which the following questions could be answered from publicly available data:

- 1) How have the factors that affect postsecondary enrollment changed over the past six years in Central Texas high schools?

- 2) How do Central Texas high schools compare to Texas schools with similar student demographics on those factors that influence future success for high school graduates?
- 3) How do the transition rates to in-state, two- and four-year colleges and universities for key groups of Central Texas students compare to those for similar groups of students across the state?
- 4) How do the educational attainment levels and trends in the Austin Metropolitan Statistical Area (MSA) compare to those in selected MSAs across the U.S? (Selected MSAs include those with which Austin often competes for the types of economic expansion that require a well-educated labor force.)

Limitations of using only public data sources to answer these questions are discussed in the full report.

The analysis of publicly available data revealed that:

- 1) The size and demographics of the four Central Texas school districts in this study changed dramatically over the past six years.
 - All districts grew over this time period, with rates of growth of high school graduates ranging from 24 percent in Austin ISD to 104 percent in Del Valle ISD.
 - The share of Hispanic students increased in all four school districts over the past six years but the rates of change varied greatly by district and individual high school.
- 2) Central Texas schools with a population of more than 40 percent low-income students showed some weaknesses in preparing students for college compared to schools throughout Texas with similar student demographics.
 - These schools had lower shares of student passing rates on all TAKS exams.
 - Low-income Central Texas schools enroll more students in Advanced Placement (AP) or International Baccalaureate (IB) courses than demographically similar Texas schools, they generally do not perform as well on these exams.
- 3) Overall, 49 percent of 2004 Central Texas high school graduates enrolled in two-year or four-year Texas institutions of higher education in the fall semester following graduation.
 - Transition rates to Texas colleges varied greatly by high school. In general, the share of graduates going to college was inversely related to the share of low-income students in a high school, suggesting that the family incomes of a school's students is one factor associated with rates of postsecondary attendance.
 - Low-income study schools lagged behind other Central Texas schools and all low-income Texas schools in the number of their students transitioning to postsecondary education.

- Central Texas schools with less than 40 percent low-income students outperformed Texas schools with similar student demographics on this indicator.
- 4) Many communities with which Austin competes for economic expansion have similar shares of residents with high school diplomas and bachelors' degrees as Austin.

In the past several years, the Central Texas school districts in this study have developed a number of initiatives aimed at improving graduation rates for low-income students and improving rates of postsecondary enrollment. The business community has also begun initiatives to improve Austin's economic competitiveness. The analysis of publicly available data documents the need for such initiatives but does not provide information that is detailed or recent enough to learn whether or not these initiatives are having the desired effect.

Pilot Survey of High School Seniors

The third major research activity in the first year of the Data Center's operations was the development and pilot implementation of the high school student senior survey. The major purposes of this survey are to obtain important background information not contained in automated school databases and student contact information for future follow-up surveys. The 2005 pilot survey was also used to test the wording of survey questions, survey implementation procedures and the usefulness of report formats for participating districts.

The survey covers three major topics: family backgrounds and identification of major influences on graduates' decisions about their futures; graduates' participation in high school activities, studies and work; and methods that school districts used to prepare students for life after high school. Due to the limited time available to recruit school districts and develop the 2005 survey, the initial survey was administered in the summer following high school graduation and restricted to students who authorized school districts to release their directory information and were over 18 years old at the time of the survey. The survey was primarily conducted via the Internet to test the method that will be used in future years when the survey will be conducted in the high schools prior to students' graduation.

A total of 235 graduates from the Austin, Del Valle, Pflugerville and Round Rock school districts responded to this pilot survey, representing eight percent of graduates for whom valid addresses and telephone numbers were available. Respondents to the pilot survey may not be fully representative of all Central Texas high school graduates, but illustrate a range of backgrounds and experiences that reflect the diversity of both the students and the schools participating in this pilot. Any deficiencies in representation will be addressed once the Data Center is fully implemented.

Analysis of responses to the pilot survey revealed the following information about the topics identified in the literature as influential to successful postsecondary and labor market outcomes:

Family background/influences

- Central Texas high school graduates come from a wide variety of different socioeconomic backgrounds.
- The largest influence on all respondents' future decision-making was their own ideas, followed by what parents/grandparents thought. Teachers' suggestions ranked fairly low on almost all of their decision-making processes. Differences in influences and expectations occurred between college-bound and other students, and among students from different income backgrounds.
- In general, parents of most respondents encouraged them to go to college and expected them to do so. Many students listed their parents, families and relatives as the most helpful persons in preparing them for college, especially those with well-educated parents. Respondents who planned to go to college stated that their parents were more involved in their education than did other respondents.

High school experiences

- Most respondents (over 89 percent) participated in some type of extracurricular activity, whether that activity was inside of school or outside of it. The range of activities in which graduates participated was wide and included many types of non-classroom activities (e.g., community service activities, volunteering for faith-based or charitable organizations.) College-bound students tended to participate in sports or service-oriented activities while more non-college-bound respondents participated in music.
- Many students worked while attending high school. Six out of every ten respondents worked, with Hispanics and women working more than other students. Typically, students who worked more reported studying less. However, Hispanic students reported higher levels of both work and studying than either White or African-American students. Asian students reported studying more and working less than any other group

Preparation for life after high school

- Altogether, 93 percent of students met with a school counselor for a variety of reasons. Different groups of students reported meeting about various topics (such as help with financial aid, class choice, academic performance and life after graduation) at differing rates.
- Respondents' perceptions of how well their high schools, high school staff members and classes prepared them for life after high school varied widely across districts and different racial and gender groups. In general, African-Americans felt that their math skills were less-well developed than graduates from other groups. Female respondents felt less prepared in social studies, science and mathematics than male respondents.
- To prepare for life after high school, 70 percent of respondents applied for some sort of financial aid, and 59 percent completed FAFSA. Asian and Hispanic graduates had difficulty understanding the financial aid process. Women and men applied for different types of aid, and students attending low-income schools found school staff more helpful with the financial aid process.
- Graduates not planning to attend college cited insufficient financial resources as the primary reason for that decision.
- Respondents from well-educated families felt that their technology skills were better developed than other respondents. These graduates also participated in more activities to prepare them for further education.

Conclusions

The literature review, analysis of publicly available data and pilot survey of high school graduates in four Central Texas ISDs were conducted as preliminary steps to the full implementation of the Data Center's research design. Initial findings from these activities are only pieces of an incomplete puzzle. Readers should be cautious in drawing conclusions solely from any single approach or source of information. However, even with their limitations, the following conclusions can be drawn from the combination of these three separate analyses and used to guide future work:

- 1) All Central Texas school districts studied are experiencing both rapid growth and significant demographic shifts in student populations that have important implications for postsecondary success. Students from Hispanic and low-income families are on the rise across all school districts. Historically, students from such families are less likely to attend college.
- 2) Central Texas high schools with large shares of low-income students lag behind both more affluent Central Texas schools and all Texas low-income schools in

preparing their students for and enrolling their graduates in postsecondary education.

- 3) All four districts in the pilot study are already making significant efforts to inform students about educational opportunities beyond high school, but they use different approaches to give students information about postsecondary education and financial aid.
- 4) Family background matters in many key ways, but some school districts do not collect sufficient family background information needed to better target counseling efforts.
- 5) The diversity of the family backgrounds in some school districts makes it more difficult for them to satisfy all of their parents and students with their educational services. Other Central Texas districts will face similar challenges as they become more diverse.
- 6) Students' perceptions of how well their high schools prepare them for postsecondary education vary by gender and race/ethnicity.
- 7) Finally, information gleaned from publicly available data sets and the typical low-response surveys of graduates are not sufficient for a comprehensive longitudinal study of Central Texas high school graduates that will support continuous improvement strategies for education decision makers.

Recommendations

The broad conclusions presented above support a number of initial recommendations for area school districts, businesses, parents and the community at large. These somewhat general recommendations are primarily drawn from the current research literature and suggested by the other analyses described in this report.

School districts should:

- Develop or expand initiatives aimed at improving the college readiness of minority, low-income students and those from less educated families;
- Eliminate high proportions of beginning teachers in any one school and provide more professional development to schools with a greater proportion of less experienced teachers; and
- Gather better information on the educational backgrounds of students' families.

The community should:

- Foster greater support for and collaboration among community-based organizations (CBOs) serving minority, low-income students and those from less educated families;
- Create school campus/neighborhood association and CBO collaboration on college preparation nights;
- Target financial aid sessions specifically to families — such as Asians or Hispanics — who may have difficulty understanding the standard ways in which this information is presented; and
- Identify and support additional research to document and analyze students' experiences in education and the world of work beyond high school.

Parents, who are one of the most important focal points for efforts to increase postsecondary success for Central Texas students, should:

- Attend and actively participate in college nights and related events held at their schools, churches and community centers;
- Learn about and talk to their children about postsecondary educational opportunities, an activity that is particularly important for parents who have not attended college; and
- Expose their children as early as possible to postsecondary options in the Austin area.

Businesses have developed a number of initiatives in which they are working with schools to improve student performance. However, because few evaluations of the effectiveness of these efforts are documented in the research literature, relevant business groups should work with the research community to evaluate current initiatives and identify best practices.

Plans for Future Work

In the second year of this project, the research team will add other components needed to fully implement Data Center activities and negotiate memoranda of understanding (MOUs) with additional ISDs. Future analyses will assess the importance of high school experiences on students' participation in future postsecondary education and employment. In addition to tracking the outcomes of individual students through administrative databases, the Data Center will survey students to gather data on *why* these postsecondary choices were made, and *why* they were or were not successful in their transition to adult life after completing high school. The Center will engage policymakers and stakeholders in discussing possible improvements to education policy and practice that are revealed from this research.

Chapter I. Background and Project Overview

Background

Globalization, technological innovation and the ongoing restructuring of work have created a “skills premium” for well-educated and trained workers in the U.S. and locally. Yet, even as Central Texas faces these changing demands on the workforce, according to the Texas Higher Education Coordinating Board’s (THECB) higher education plan, *Closing the Gaps by 2015*, its most precious resource is in jeopardy (2000). According to this report the Austin region must find a way to add 50,000 more college graduates in the next ten years or if it does not, Austin's economic strength could lapse and it could lose its competitive edge to other regions in both this country and the world.

In 2000, the U.S. Census revealed that Texas has the highest percentage of adults without high school diplomas of any state. Texas is also experiencing major demographic shifts such that it will soon be a minority-majority state. Presently, the state’s minority populations enroll in higher education at very low rates. In addition to these economic and demographic changes, education policy changes such as the No Child Left Behind Act of 2001 (NCLB) are increasing the spotlight on the academic achievement of all students, particularly students of color. Texas now requires independent school districts to enroll high school students in a more rigorous core curriculum, the Recommended Graduation Plan (Texas Administrative Code). Collectively, these changes mean that there has never been a greater need for business and education to collaborate in preparing both current and emerging workers for success in their careers, starting with improved high school graduation rates and including higher rates of postsecondary enrollment and completion.

Finally, school districts often lack the technology and data to support the varied information and analytic needs of their stakeholders. A longitudinal data system may be the only efficient means of addressing these growing information needs and make it possible to conduct value-added research that utilizes linked data on students, teachers and programs/initiatives/interventions over time. Such research can help the U.S. Department of Education, state education agencies, school districts and schools identify the most cost effective means of eliminating performance gaps between groups of students and contribute to improving the achievement of all students.

For all of these reasons, the Greater Austin Chamber of Commerce (GACC) approached Skillpoint Alliance (Skillpoint) and the Ray Marshall Center for the Study of Human Resources of the University of Texas Lyndon B. Johnson School of Public Affairs (Ray Marshall Center) about conducting research that could aid decision-making by local business and education officials and result in better outcomes for local high school graduates. The Central Texas High School Graduate Data Center (Data Center) is being developed for that purpose.

Central Texas High School Graduate Data Center Five-Year Overview

The Data Center is a research partnership between the Ray Marshall Center, Skillpoint and a growing number of Central Texas independent school districts (ISDs). The Data Center has begun to follow the progress of Central Texas graduates 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 Data Center's purpose is two-fold:

- To provide Central Texas independent school districts, colleges, universities and employers with a comprehensive, longitudinal view of what high school graduates are doing after high school and, most importantly, *why*; and;
- To foster evidence-based best practices through workshops, seminars and applied research, assisting the region's ISDs, Education Service Center and postsecondary institutions in improving student achievement, instruction and school performance.

As defined in this project, Central Texas is comprised of Hays, Travis and Williamson counties and includes 22 school districts.¹ The 2000 Decennial Census data for Travis, Williamson and Hays counties shows median household incomes of \$53,020, \$68,759 and \$51,030 respectively (converted to 2004 dollars). In Travis and Williamson counties, 11 percent of families with children under 18 years old have incomes below the poverty level. In Hays County, eight percent of families with children live below the poverty level. Hispanics comprise 19 and 32 percent of the total county populations in Williamson and Travis, respectively, and 30 percent in Hays. Roughly one fourth of residents in these

¹ This count only includes those school districts whose headquarters is located in one of these counties.

three counties speak a language other than English at home. According to the Texas Education Agency (TEA), the total number of students served in the three-county area, including all schools and districts, is 223,308 students (2005).

Major Research Questions and Expected Results

In each year of this five-year study, the Data Center will answer four major research questions for the region's high school graduates:

- 1) Which graduates are participating in postsecondary education and why?
- 2) Which graduates are going to work and why?
- 3) Which graduates are both working and participating in postsecondary education?
- 4) Which graduates are participating in other postsecondary activities, such as joining the military, entering the prison system, or receiving welfare, and why?

The first two questions comprise the study's primary focus, and will be analyzed for Central Texas graduates as a whole and for key population groups of graduates. To determine both what young adults plan to do after high school and key influences on these outcomes, the Data Center will survey students just before they graduate from high school and again one year following their graduation. Students' educational and labor force progress will be followed for 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 local educators and business leaders so that they can use this information to improve their educational practices for future cohorts of high school students. More detailed information on planned research methods is discussed in Appendix A.

Key results expected from the Central Texas Data Center include, among others:

- Better understanding of the factors associated with postsecondary success and failure on the part of 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.

First Year Research Activities

The Data Center research components are being phased in over a two-year period. Four ISDs — Austin, Del Valle, Pflugerville and Round Rock — participated in the Data Center project in 2005, working with researchers to pilot and test the survey instruments and presentation formats that will be used once all Data Center components are fully implemented. These four districts were selected because of their differences in size and student demographics, as shown in Table 1.² Additional ISDs will be invited to join in 2006, pending additional funding. All components of the project should be fully implemented by the end of the 2006 calendar year.

Table 1. Characteristics of School Districts in 2005 Pilot

District	Total Students	Percent Low Income ³	Percent Hispanic	Number of High Schools	Total 2005 Graduates
Austin ISD	79,707	59%	55%	12	3,736
Round Rock ISD	36,567	23%	23%	4	1,981
Pflugerville ISD	17,550	36%	32%	3*	938
Del Valle ISD	7,728	74%	71%	1	348

* One of Pflugerville's high schools did not have a graduating class in 2005.

Data sources: Data for the first three columns is from TEA, AEIS 2004-05 District Profiles. The last column's information was provided by each district; Round Rock ISD graduation data does not include alternative education facilities.

In its first year of operation — January through December 2005 — the Data Center:

- Developed partnerships with the four ISDs that are participating in the pilot phase of this project;
- Analyzed existing literature and publicly available data to glean available information on background factors contributing to successful post-high school outcomes and rates of postsecondary enrollment for Central Texas graduates;
- Conducted focus groups and piloted a survey of 2005 high school graduates from the participating school districts to identify key information on graduates' family

² More complete descriptions of these ISDs are included in Appendix A.

³ According to the TEA, “the percent of economically disadvantaged students is calculated as the sum of the students coded as eligible for free or reduced-price lunch or eligible for other public assistance, divided by the total number of students” (TEA, 2005). In this report, we will also use the term *low-income* to identify this group of students.

backgrounds, high school activities and methods of college preparation that could not be determined from detailed school records; and

- Developed a detailed statistical analysis plan describing the research methods and data sources to be used once the project is fully implemented.

Contents and Organization of this Report

This report discusses findings from research activities conducted during the Data Center's first year of operations. Chapter 2 summarizes relevant literature on factors affecting successful secondary education outcomes. The third and fourth chapters provide detailed research questions, methods and results from the two major 2005 research activities. Chapter 3 highlights research from publicly available administrative and survey data, while Chapter 4 presents findings from the pilot survey of recent high school graduates in participating ISDs. Chapter 5 offers some preliminary conclusions and recommendations and summarizes plans for future work for the Central Texas High School Graduate Data Center. Finally, four appendices provide more detailed descriptions of research methods used, background information on variables that prior research has found to be important in understanding transitions from high school to postsecondary education and the labor force, detailed statistical results and a copy of the survey items included in the pilot survey.

Chapter II. Summary of Research Literature on Successful Transitions from Secondary Education

Introduction

The question of the relevancy and efficacy of the American K-12 public education system has been hotly debated for decades, and arises from recognition that educational practices have changed little even as the United States economy has undergone a dramatic shift from industrially-based and manufacturing-focused, to knowledge-based and service-oriented.

The consequence of this disjuncture between work and education is a sense of the diminishing relevancy of the high school diploma as the basic common denominator for leading a successful life after graduation. For example, Anthony Carnevale notes in his report, *Standards for What? The Economic Roots of K-16 Reform*:

Throughout history, the American dream and the American reality have been that people could start at the bottom and, without much formal education, work their way to the top. But in the past 50 years, the rules have changed because the nature of the economy has changed (2004).

As a result of this shift, researchers have undertaken a range of studies intent on identifying the systemic flaws in the public education system and determining ways in which to encourage more young people to seek additional education beyond high school.

In the initial phase of research for this project, a group of graduate students in the LBJ School of Public Affairs at the University of Texas conducted an extensive literature review to determine both what young adults plan to do after high school and key influences behind these choices. The existing literature identified certain critical background variables that are associated with positive and negative education and labor force outcomes. (LBJSPA, 2006) While all studies could not share conclusively the specific characteristics related to postsecondary transitions, several studies overlapped in identifying common characteristics that can be grouped into several overarching themes including: (1) social background, (2) personal academic background, (3) school variables, (4) community variables and (5) postsecondary education variables. The following chapter summarizes the findings of previous studies that found these themes were relevant to postsecondary transitions and

influential to both access and success in a postsecondary setting. Two of the five themes look directly to the student's individual attributes and include both social background and personal academic experience and performance. The next two themes relate more broadly to the environment in which the student learns and include specific campus variables as well as a larger view of the community in which the school is situated. The final theme focuses on postsecondary institutional characteristics, including size and cost of attendance. Since the inaugural report in this project looks exclusively at the K-12 system, this chapter will not review the variables that focus on the postsecondary experience after enrollment. Future reports will feature these variables as researchers track the first study cohort in their lives beyond high school.

Social Background

Studies conducted that relate to a student's family and social background cite twenty-one variables that correlate to postsecondary attendance. These variables include:

Positively correlated:

- Above average family income level
- Attended a religious institution
- Belonged to a church youth group
- Gender, if not male
- Good relationship with parent
- High parental expectations
- High personal plans and expectations, by grade level
- Number of friends in college
- Parent's (particularly mother's) postsecondary experience
- Parent's involvement with child's education
- Parent's occupation
- Participated in extracurricular activities (especially sports or music)

Negatively correlated:

- Changed schools two or more times from 1st to 8th grade
- Confused over financial aid
- Employed while in school
- Received public assistance at any time
- Lived in a single-parent household in 8th grade
- Number of siblings (worse off with more)
- One or more siblings left high school without completing
- Race other than white
- Spoke a language other than English at home

Researchers have shown that of the variables listed above, certain specific social background characteristics have an especially prominent linkage to postsecondary transition. For example, two major studies successfully correlate high personal plans and expectations for degree attainment throughout a student's school years to successful postsecondary transitions. Clifford Adelman (1999) in *Answers in the Toolbox* and Alberto F. Cabrera, Steven La Nasa, and Kurt R. Burkum (2001) in *Pathways to a Four-Year Degree* observe that the students "anticipations, not aspirations" are critical to the choice to enter and remain in a 4-year college. This same variable may not have the same level of influence, however, for students planning to enter a 2-year college.

In some literature, parental postsecondary education experience shows a strong link to student postsecondary enrollment. Several National Center on Education Statistics (NCES) reports show "that such students whose parents did not attend college are at a distinct disadvantage when it comes to postsecondary access" (Choy, 2002). Choy's project found that as parents' education and family income increase so do their high school graduates' likelihood of continuing and succeeding in postsecondary education. However, this same variable was shown to be less meaningful in Adelman's study on postsecondary success.

Confusion and stress over financial aid is another important characteristic according to research conducted by Laura Horn for NCES. The study revealed that "the students and parents who can least afford college and who would be most affected by the financial burden were the least aware of how much it costs to attend." The consequence of this lack of knowledge is that this critical portion of the student population "may unnecessarily be discouraged from preparing for college" (Horn, 2003).

These same studies also verify that parental involvement plays a critical role in a students' likelihood to transition to postsecondary education. Involvement has several dimensions, which include: assistance with and/or oversight of homework; active participation in school activities; active engagement with classroom teachers; and active engagement in helping the student choose classes and subjects. Parental involvement is an issue that has also become highly politicized and therefore is difficult to study without presumptions of bias. However, regardless of one's political perspective, these studies acknowledge that the "home is also a primary site for education" (Noddings, 2004).

Researchers looking into parental involvement have found provisional correlations between the level of involvement in the above variables and the likelihood that students will enter college or universities. For example, Ralph McNeal (1999) found that parental involvement tended to have a greater effect on a student's behavior rather than his or her cognitive abilities (and hence academic achievement). This finding seems to indicate that students pick up on cues about both the value of education and how to attain it through parental influences. Researchers conducting a meta-analysis of empirical studies addressing parental involvement reinforce the position that parental expectations influence student behavior more than other forms of involvement such as oversight of homework (Fan & Chen, 2001).

Another variable that affects college transitions is students' involvement in activities during their high school years. Horn and Carroll (1998) found that participation in two or more extracurricular activities, such as sports or music, helped students transition to college by engaging them more in their school and their educational experience. One large activity that has mixed effects is work during high school. Although some job experience helps students manage time and earn skills, excessive work is detrimental. Stern (1997) found that students who work more than 15 hours per week tend to experience a negative impact both on academic success and on transitioning to college.

While social background factors have been found to impact a student's academic achievement, a record of success in the classroom also plays an important role in both access and success in a postsecondary setting. The next section will review literature that identifies key variables to both attaining and succeeding in postsecondary settings. It is important to note that most of the literature focuses on either 2-year or 4-year college programs. Much less research has been conducted on certification programs that young people may enter upon high school graduation.

Personal Academic Background

The personal academic background of a student represents the second overarching theme identified in the literature review. Significantly, personal academic background has been correlated to the likelihood of college attendance. However, the theme itself includes several characteristics which have varying degrees of influence on postsecondary enrollment.

This review highlights certain characteristics with both negative and positive links to postsecondary attendance:

- The consequences of average grades of C's or lower in grades six to eight;
- Being held back one or more grades from first to eighth;
- Changing schools more often than the normal progression;
- Use of technology;
- Number of math classes taken; and
- Number of classes and test scores in Advanced Placement (AP) courses.

Horn's research into social background, mentioned earlier, also made correlations between negative experiences in a student's academic background and certain important family influences including low socio-economic status (SES), older siblings who have left school without a diploma, and single parent households (Horn, 1997). Positive characteristics are related to grades, coursework, test scores and technology. Research by C. Adelman (1999 & 2006), M. Scott DeBerard et al (2004), L. Horn and L. Kojaku (2001), and T. Snyder et al (2004) support the positive correlations of these characteristics. However, Adelman determined that the rigor and content of high school coursework (part of a composite variable labeled "academic intensity") weighed more heavily in access and subsequent completion of a postsecondary degree than did either test scores or grades/class rank. Adelman (2006) and Venezia (2003) also made particular note of the number of math classes, the level of those classes,⁴ number and scores of AP tests and rigor of curriculum as positive indicators for postsecondary degree attainment. DeBerard et al's (2004) longitudinal study of college freshmen found that "retention is modestly [negatively] related to low freshman year academic achievement and low high school GPA."

It is important to note that although Adelman (1999) found that test scores were not necessarily a clear indicator for postsecondary degree attainment, other researchers found a direct correlation between the rigor of coursework taken and higher levels of performance on these tests. In the study *High School Academic Curriculum and the Persistence Path Through College*, researchers Horn and Kojaku (2001) found in their statistical analysis that

⁴ Among those who took a college level Calculus class in high school, 80 percent finished a bachelor's degree.

“how well students scored on their SAT/ACT or college entrance exam was strongly associated with the level of academic curricula they had completed”(2001).

Additional variables not directly associated with personal academic achievement appear to affect the likelihood of access and success at the postsecondary level. An important example of this type of ancillary variable is found in the research of Thomas Snyder et al for NCES. This study found a strong association between use of computers at home for school work and family income (2004). However, the statistical data did not take the next step and make the correlation to student achievement. It is for this reason that the Data Center has undertaken to utilize this variable through the survey portion of the project. The majority of literature pertaining to technology and achievement focuses primarily on instructional technology used on campus rather than access to technology in the home. In these studies, findings indicate that overall achievement in core subject areas improved with the use of educational technology, but that this improvement could not be divorced from other key variables such as the demographics of student population and overall student access to technology (Schacter, 1999).

Since the question of technology is so closely associated with school experience as are many of the variables related to student academic achievement, it is important to also review the specific characteristics of individual school environments in order to provide a more comprehensive context for student high school performance as it relates to preparation for successful attainment of a postsecondary degree, or for entry into the labor market. What follows is a review of certain key school variables as they affect student choices and plans for life beyond high school.

School Variables

Several school variables accounted for in the literature review have an important link to postsecondary transition including:

- Teacher “quality” as measured by percent of teachers with appropriate credentials;
- Years of teaching experience;
- Rigor of coursework;
- Technology availability in the school;

- Teacher-to-student ratio;
- Racial and economic statistics for the school, especially if not white or upper middle class; and
- Availability of mental health counseling.

The literature review focused on variables pertaining to teacher “quality,” years of experience and racial and economic statistics of the school. In particular, a body of research by Eric A. Hanushek et al verifies that “low income and minority students face higher teacher turnover and tend to be taught more frequently by beginning teachers” (2005). The research also makes a policy recommendation to direct the more experienced teachers to teaching disadvantaged students in order to mitigate the beginning teacher’s learning curve challenges. Adelman’s research also revealed how a high school unable to provide higher levels of math for its students is highly negatively correlated with the likelihood of a student’s transition to postsecondary education (2006). Not only does teaching experience matter, but how students are taught matters as well. Texas Center for Education Research (2002) found that teachers’ use of technology greatly impacts students’ motivation and ability to learn, and thus their ability to succeed in education.

In addition, the demographic composition of the school matters in both completing a high school diploma and attaining a postsecondary degree afterward. In a study conducted by the Educational Testing Service’s Policy Information Center, findings indicate that schools with significant proportions of its population with low SES were likely to have diminished percentages of both graduation rates and students moving on to postsecondary settings. The study did not control for race or ethnicity (Barton, 2005). It is important to note that several studies that focused mostly on student academic achievement and postsecondary success have found a diminishing correlation between low SES and postsecondary degree attainment over time (Adelman, 1999 & 2006).

The constellations of variables that affect student choices for life beyond high school thus far have included social background, student performance, and school environment. The exploration would not be complete without situating these variables within the larger context of the immediate world in which they live. The challenge is that community variables pose much more of an indirect influence on outcomes and therefore are both difficult to identify and then to correlate. The next section will feature some of the research

in this arena, although readers should note that the literature is more speculative than with the other variables reviewed thus far.

Community Variables

While community variables result from the concentration of student and family backgrounds, these characteristics have implications for a student's likelihood to succeed in his or her postsecondary transition. To a certain extent, some of these variables may be viewed as forms of social capital that researchers have identified as contributing to a student's successful academic performance and transition to postsecondary settings. In his groundbreaking book on social capital, *Bowling Alone*, Robert Putnam notes that research indicates certain forms of "informal social capital" — that is the level of social trust and the frequency with which people connect spontaneously rather than through planned community meetings — may have more of a positive association with student performance than even formal structures such as community projects, church groups and the like (2000). That is not to say the formal programs that support student performance are not helpful, but rather communities that show active parental association and involvement tend to correlate to more positive student behavior.

This concept is explored in a different but parallel manner in a Center for Public Policy Priorities white paper observing that models of parental and community behavior that promote active engagement versus a more passive involvement may help to create stronger school environments (1998). For example, one model used in Dallas, the Alliance for Schools Initiative, creates "core teams" — comprised of teachers, campus administration and parents — whose aim is to improve student performance and participate in school reform. Of the several practices used by these core teams, one is the ability for parents to help teachers identify which "elective" classes may be of need (both to the student and the community). In this case, parents can identify subject matter ranging from parenting to computer literacy (Center for Public Policy Priorities, 1998). Programs such as the Alliance for Schools Initiative use community activism as a method for improving the school environment and, indirectly, student performance.

With this model in mind, it is important to look at other characteristics of the community that affect this concept of “social capital.” The community variables identified from the literature review include:

- Average income of zip code;
- School funding per student;
- Racial and economic statistics on the community; and
- State classification of school districts as low-performing to high-performing.

NCES reports in the *Condition of Education 2004* highlighted how African-American and Hispanic students are more likely than Whites to be from low-income families and more likely to be concentrated in high-poverty schools. These studies found that the location of these concentrations of high-poverty schools in central cities, on the urban fringe, and in rural areas affects a community’s record in sending students to postsecondary institutions (2004). The report by Fry, Carnevale and Turner argues that families with chronic low income “remain a powerful arbiter of the opportunities for college enrollment as well as college completion”(2001). To the extent that community programs and projects — whether through youth programs, faith-based initiatives, or district-led efforts — can assist in identifying resources to support students, factors such as family income may be mitigated. The chapter addressing survey results identifies certain preliminary findings that are suggestive of strategies to provide such support.

Thus far, this review has directed the discussion of social capital toward programs and projects that enhance and encourage either family connectedness to community or strong community programs. However, a third dimension of social capital bears further scrutiny as well – that is the role that local industry may play in assisting student performance and/or successful transitions to life beyond high school. While there is a body of literature that addresses business engagement in efforts concerning school-to-work, or career academies, far less formal research has been conducted on roles local business can play in areas that promote successful transitions to postsecondary training (Kemple, 2001). These roles may include business volunteers who mentor or tutor students, or local businesses that strongly encourage their student employees to continue in their education through incentive programs such as tuition reimbursement models. Part of the challenge to capturing these data empirically is due to the fact that programs promoting industry-school relationships are

relatively new (within the last ten years) and often rely on anecdotal evidence to demonstrate success. While these examples prove compelling it is difficult to determine whether long term, sustained programmatic efforts have made a significant impact over larger numbers of students (Glover, 1996).

Ultimately, students' transitions to postsecondary education are affected by the practices and environment of the postsecondary institutions themselves. Researchers have examined institutions to identify factors and characteristics that may hinder or support the high school graduate's successful transition. The next section reviews these studies.

Postsecondary Variables

The postsecondary variables linked to high school-to-college transitions are broken out into:

- College bridge programs;
- Cost of college;
- Presence of a college recruitment program;
- Financial aid programs and assistance;
- College facilitation of social non-academic programs; and
- The size of the college.

The activities in postsecondary education that were considered separately include smoking, drinking often, enrolling full-time instead of part-time, living at home, and participating in activities that encourage social inclusion.

Although the literature review identified several variables affecting postsecondary degree attainment, the following discussion will focus on two variables of special emphasis: *the cost, size and/or type of institution and their importance to promoting or inhibiting postsecondary persistence and success*. These two characteristics are closely intertwined because the cost of a postsecondary institution often comes into play with size and/or type. Large public institutions have the reputation of being more affordable than most, smaller private institutions. As a result, there is an extensive body of research by Susan Choy, Lawrence Gladieux, Donald E. Heller, Alberto Cabrera, and Amaury Nora that link college costs (and/or financial aid) and size with a student's college selection and persistence,

especially for lower socio-economic status students. Patricia M. McDonough reported the following regarding college cost in her report, *The School-to-College Transition: Challenges and Prospects*.

College costs and financial aid play a dramatic role in the college choices of low-SES students, as well as African-Americans and Latinos, all of whom tend to be highly sensitive to tuition and financial aid levels. These students are negatively influenced by high tuition, but positively influenced by financial aid (2004).

To validate this observation, a report conducted by the Advisory Committee on Student Finances in 2001 estimated that 1.2 million college-ready students opt not to attend postsecondary institutions due to concerns about how to pay for it.

A policy report issued jointly by Jobs for the Future, the Center for America's Progress and the Institute for America's Future, suggested several ways in which access to and success in postsecondary settings may be achieved by many more students. These recommendations focused primarily on reducing the pressure of cost for a college education and "sealing" the leaks in the pipeline between 12th grade and beyond. Essentially, the report suggests that American public education should minimally be viewed as a K-14 system (Pennington 2004). Finances and difficulty in the transition process remain two of the greatest barriers to exponentially increasing the number of students moving directly into postsecondary education from high school.

Summary

This review of literature represents only a portion of the research conducted that addresses questions or concerns with the American public education system. The breadth of methodology represented across both the qualitative and quantitative spectrums informs this project both in process and in the variables that are featured in the study of Central Texas school districts. The literature, when combined with other research efforts described later in this report, provides a starting point for other Data Center activities.

Chapter III. Analysis of Public Data Sources

Once it is fully implemented, the Central Texas High School Graduate Data Center will longitudinally track students from high school through college, using a combination of administrative data sources and student surveys to answer the project's research questions. However, even before the project is fully implemented, it is possible to glean some information about the experience of Central Texas graduates from publicly available data and existing research reports. These sources also reveal information about how educational attainment in Central Texas is changing relative to the educational attainment of its major competitor cities and regions across the nation.

Research Questions to be Analyzed from Public Data Sources

Findings from the review of existing research literature summarized in the previous chapter were used to identify publicly available data sources containing some key variables that affect postsecondary transition rates.⁵ Those public data sources were then used to answer the following questions about Central Texas schools and students:

- 1) How have the factors that affect postsecondary enrollment changed over the past six years in Central Texas high schools?
- 2) How do Central Texas high schools compare to other Texas schools with similar student demographics on those factors that influence future success for high school graduates?
- 3) How do the transition rates to in-state, two- and four-year colleges and universities for key groups of Central Texas students compare to those for similar groups of students across the state?
- 4) How do the educational attainment levels and trends in the Austin Metropolitan Statistical Area (MSA) compare to those in selected MSAs across the U.S? (Selected MSAs include those with which Austin often competes for the types of economic expansion that require a well-educated labor force.)

⁵Analysis of public data sources was only planned for the first year of this project. Future analyses will rely on linked individual-level administrative and survey data that are not readily available to the public.

Research Methods

The depth and breadth of the background variables related to successful postsecondary and labor market transitions identified in the existing literature preclude their inclusion in any single data source. Information on these topics was culled from the multiple sources of administrative and survey data that are listed in Appendix B. After considering the validity and content of each source, researchers determined that many were unsuitable. The remaining data sources were used to analyze each of the primary research questions. Table 2 lists these sources and the years for which they were available. Because even these data sets have limitations, researchers grouped schools with similar characteristics (e.g., by demographics or percent of low income students) to draw additional conclusions about the school-level research questions.

Table 2. Data Sources used to Answer Research Questions

Research Question	Data Source	Years
1. Changes over past six years in key variables	TEA: Public Education Information Management System (PEIMS); Academic Excellence Indicator System (AEIS)	1998-2005
2. Background factors associated with success	TEA: PEIMS/AEIS	2004-05
3. Transition rates from high school to college	THECB: High School to College Linkages	2005 report on 2004 graduates
4. Educational attainment	U.S. Census: American Community Survey	2000-2004

The primary limitation of this approach is the absence of some key variables in the public data sources, which forced researchers to use proxy variables. Additionally, measurements from the publicly available AEIS data set are at the school rather than student level. Finally, there is only a tenuous link between data related to the background factors influencing future collegiate entry and success and the data dealing with those actual transition rates. These limitations make it impossible to perform a more sophisticated statistical analysis.

Summary of Findings from Public Data Sources

An analysis of publicly available data using the methods described above produced the following key findings for each of the four research questions:

- 1) The size and demographics of the four Central Texas school districts in this study changed dramatically over the past six years.
 - All districts grew over this time period, with rates of growth of high school graduates ranging from 24 percent in Austin ISD to 104 percent in Del Valle ISD.
 - The share of Hispanic students increased in all four school districts over the past six years but the rates of change varied greatly by district and individual high school.
- 2) Central Texas schools with a population of more than 40 percent low-income students showed some weaknesses in preparing students for college compared to schools throughout Texas with similar student demographics.
 - These schools had lower shares of student passing rates on all TAKS exams.
 - Low-income Central Texas schools enroll more students in Advanced Placement (AP) or International Baccalaureate (IB) courses than demographically similar Texas schools but generally do not perform as well on these exams.
- 3) Overall, 49 percent of 2004 Central Texas high school graduates enrolled in two-year or four-year Texas institutions of higher education in the fall semester following graduation.
 - Transition rates to Texas colleges varied greatly by high school. In general, the share of graduates going to college from each high school was inversely related to the share of low-income students in that high school, suggesting that the family incomes of a school's students is one factor associated with rates of postsecondary attendance.
 - Low-income study schools lagged behind other Central Texas schools and all low-income Texas schools in the number of their students transitioning to postsecondary education.
 - Central Texas schools with less than 40 percent low-income students outperformed Texas schools with similar student demographics on this indicator.
- 4) Many communities with which Austin competes for economic expansion have similar shares of residents with high school diplomas and bachelors' degree as Austin does.

In the past several years, the Central Texas school districts in this study have developed a number of initiatives aimed at improving graduation rates for low-income

students and improving rates of postsecondary enrollment. The business community has also begun initiatives to improve Austin's economic competitiveness. The analysis of the public data sources cited above documents the need for such initiatives but does not provide enough detailed information to learn whether or not these initiatives are having the desired effect.

Many research questions envisioned for the five-year Data Center study cannot be answered solely from an analysis of publicly available data or existing reports. Major limitations of such an approach include: restriction of the analysis to schools or major student demographic groups; the inability to link the academic performance of individual high school students to their educational and labor market outcomes; and the omission of some key background variables that national research studies have found to be significant in predicting future academic success. All of these limitations should be overcome once the Data Center is fully implemented.

Detailed Findings from Analysis of Public Data Sources

Change in School Background Factors Since 1998

Due to privacy limitations on individual student data, the longitudinal analysis of background factors that influence student transitions to college was limited to school-level variables available in the public databases maintained by TEA. The existing research literature identifies the racial and economic makeup of schools (US DOE, 2005) and the years of teacher experience at a school (Hanushek, 2005) as two school variables that influence transitions to further education. Proxy variables available in the public data include the demographic changes experienced by schools and the percent of beginning teachers at each school over the years reviewed. Proxy variables are unavailable in the public data sets for other school variables cited in the literature, such as the ratio of college counselors to students (Venezia, 2003) and the availability and use of technology in the school (Snyder, 2003).

Demographic Changes

Since 1998, the size and demographics of school districts in the Central Texas area have changed dramatically. In this time period, the school districts issued bonds, built new schools and added new teachers. By examining portions of the Academic Indicator Excellence System (AEIS) database, a school-level, publicly available data set produced from data reported to TEA, researchers analyzed these dramatic shifts.

Both the total enrollment and the total number of high school graduates increased in all four ISDs from 1998 to 2004. The total enrollment of each school district increased by at least 6 percent (AISD) and as much as 51 percent (Del Valle) over this time period. The largest school district in the region, Austin ISD, also experienced a 24 percent increase in the number of high school graduates from 1998 to 2004, while the number of graduates at the smallest school district in the pilot (Del Valle), increased by 104 percent (Table 3). This increase in total high school graduates implies a need to extend and expand services designed to encourage students to apply for and enroll in colleges.

Table 3. Increase in Number of Central Texas High School Graduates

District	Number of 1998 Graduates	Number of 2004 Graduates	Percent Increase from 1998
Austin ISD	2,991	3,719	24%
Del Valle ISD	169	345	104%
Pflugerville ISD	536	969	81%
Round Rock ISD	1,439	2,061	43%

Data source: AEIS Years 1998-2005

In all districts studied, the percent of Hispanic graduates increased over the past six years — dramatically in the case of small districts such as Del Valle and Pflugerville, but still significantly in larger districts when considering their size and growth over the same period. The Hispanic share of these four school districts' graduating classes has increased by 25-30 percent in the last six years. However, not all schools are experiencing such a large rate of growth in Hispanic graduates. For example, Austin ISD's Reagan HS increased its share of

Hispanic graduates from 27 percent in 1998 to 50 percent in 2004. But other schools — such as Austin ISD’s Bowie and Austin high schools — experienced only a minimal increase in the percentage of Hispanic graduates over the same time period. Appendix C displays these demographic shifts for selected high schools.

Except in Round Rock ISD, white students make up less than half of the high school graduates across the districts. The share of White graduates has diminished in all four school districts over the past six years as shown in Table 4. The pattern for other race/ethnic groups shows a declining share of African American students in the Austin ISD but an increase in the share of this population group in the other three districts. Pflugerville ISD had the largest share of Asian students throughout this period and also experienced the largest rate of growth among this population.

**Table 4. Percent of High School Graduates by Racial/Ethnic Groups
1998 to 2004 Comparison**

	Austin ISD		Del Valle		Pflugerville		Round Rock	
	1998	2004	1998	2004	1998	2004	1998	2004
African American	16%	14%	12%	18%	12%	17%	6%	8%
Hispanic	31%	37%	46%	63%	14%	24%	11%	14%
White	50%	46%	40%	18%	66%	49%	77%	71%
Asian/Pacific Islander	3%	3%	2%	1%	7%	10%	6%	7%

Data source: AEIS 2003-05 and from individual school districts

Teacher Experience

Teacher experience potentially influences student success in the transition from high school to postsecondary education (Hanushek, 2005). Determining the percent of beginning teachers at a school provides some indication of the percent of experienced teachers.

When the share of beginning teachers at a school is low, a school retains the advantage of teacher experience and everything that implies: knowing how and to whom to refer a student with a question about college, knowing which classes to recommend for students interested in going on to college and knowing to discuss openly the importance and dates of college entrance exams. If a school cannot retain its teachers, the impact on

individual students will vary depending on which teachers they have. There are many adverse outcomes associated with a large percentage of beginning teachers.

While AEIS data provides yearly data on teacher experience for all Texas schools, matching that data with student outcomes proves difficult. Some schools deal periodically with large gains in beginning teachers, while other schools retain a higher percentage of experienced teachers over time. Among Central Texas schools, the percent of beginning teachers at each high school has been higher for those schools whose percent of economically disadvantaged students was greater than or equal to the median percentage for all Central Texas high schools (Table 5). This differential occurred for Central Texas schools for all school years from 1997-98 through 2004-05.⁶ Given the form of the available public data, it is not appropriate to compute the significance of these differences across Central Texas schools nor is it possible to compare these statistics to those for campus group schools across the state. See Appendix A for details.

Table 5. Percent of Beginning Teachers in all Study Schools, 1997-2005

	School Years							
	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05
Median Percent of Low-Income Students	26.0%	23.2%	20.9%	22.4%	21.4%	24.8%	29.4%	32.0%
Percent of Beginning Teachers for Schools Below (Including) Median Percent of Low-Income Students	4.4%	4.8%	5.2%	4.3%	5.0%	5.5%	5.1%	5.7%
Percent of Beginning Teachers for Schools Above Median Percent of Low-Income Students	10.7%	7.2%	8.1%	9.3%	8.9%	8.0%	8.9%	10.6%
Difference in Percent of Beginning Teachers each year at Schools Below and Including the Median Percent of Low-Income Students	6.3%	2.4%	2.9%	5.0%	3.9%	2.5%	3.8%	4.8%

Data source: AEIS 1998-2005

⁶The median percent of economically disadvantaged students was recalculated each year and used to provide consistency with other analyses in this section.

There are many reasons why schools could experience a spike in the number of new teachers (e.g., an increase in the number of students enrolled, addition of a new specialized program on the campus, change in principal, dissatisfaction with the teaching climate on that campus). While these data can show the patterns across schools, more knowledge of the particular school characteristics would be needed to determine if these changes resulted in better student outcomes; it is not possible to glean this type of information solely from the public data source used for this analysis.

Comparison of Background Factors for Texas Schools with Similar Demographics

Among the factors that lead to successful college transitions, those describing students' personal academic background are potentially available from administrative data sources.⁷ However, some of these factors revealed through the literature review require detailed year-to-year academic information about individual students (e.g. average grades of C's or lower from 6th grade to 8th grade, being held back one or more grades from 1st to 8th, or a student's high school GPA) which are not reported in public data sources because of privacy concerns. Other factors, such as the technological proficiency of students, are not collected in current administrative databases on Texas students. Due to the inability to obtain the above data from publicly available sources, these factors cannot be included in this analysis.

Those personal academic background factors that are either available in publicly available school-level data or have proxy variables that closely align with the factor are discussed in detail below. The italicized text at the beginning of each paragraph identifies the variable cited in the research literature, and the discussion following it describes which proxy variable was available in the public data sources used for this analysis.

The number of AP classes available at a school (Adelman, 1999). Though detailed information about the number of AP courses available at schools across the state of Texas is not available through publicly available sources, the percent of students taking AP or IB courses at each school was used as a proxy for this factor. Hypothetically, if more courses were offered at a school, then a higher percentage of students at the school would take them.

⁷ These and other background factors are contained with specific references in Appendix B

The disadvantage with using this proxy is that it does not distinguish between AP and IB courses.⁸

The AP test score a student receives (Adelman, 1999). Though individualized information about AP test scores are not available publicly, the percent of students who take AP or IB courses meeting a specific proficiency (the equivalent of a passing grade) on these exams per school is provided. If a school reports a high percentage for this factor, particularly combined with a high percentage of students taking AP courses, this may indicate the level of preparedness the student body receives in college-level instruction.

The number of math classes a student has taken while in school (Adelman, 1999). While this information is not directly available for the current analysis, one potential proxy indicator is the mathematics score on the TAKS exam. Students who took the TAKS mathematics exam as 11th graders in the spring of 2005 had to answer 48 percent of the questions correctly in order to qualify for graduation, compared to 40 percent for 2004 11th graders. This test is designed to measure what the state of Texas determines to be required knowledge and is increasing to an eventual passing requirement of 70 percent. It can be argued that students who passed this exam but received a score of less than 70 percent as juniors in 2004 may not actually have obtained the state-defined required mathematics knowledge. Hence, instead of considering the percent of students passing this exam as an indicator of potential future success or mathematical ability, Data Center researchers viewed the students failing this exam (with fewer than 40 percent correct answers) as unlikely to possess the necessary mathematical training to succeed in a college setting.

The TAKS test scores of students (Adelman, 1999). This information is provided at the school level, but must be treated similarly to the mathematics scores mentioned above. The percent of students at a school who fail to meet the standard on all exams indicates the distribution of the level of preparedness the school provides.

Students' ACT/SAT scores (Choy, 2001). The average SAT score of a school indicates, for those students tested, how well prepared they are for college entrance exams, which often directly correlates to the ability to gain acceptance into postsecondary education. The administration of the SAT involves a scaling process for each part of the exam

⁸ During this time period, the only Central Texas high schools offering IB courses were Anderson High School in Austin ISD and Westwood High School in Round Rock ISD.

(mathematics and verbal each with a range of potential scores between 200 and 800) so that roughly half the students taking that section receive a score below 500 while the other half receive a score above 500. Thus, if the average score on the SAT at a school is above 1000, then the students at that school have most likely performed better than the national average. For those schools with an average SAT score well below 1000, this may indicate that students are not fully prepared to take this exam. Similar considerations must be kept in mind when viewing the average score of the ACT exam at a school. The scale of the composite score of the ACT ranges from one to 36, and incorporates a scaling process similar to the SAT. Roughly half of students taking the ACT exam perform score 20 or better, while the remainder receives scores less than 20.

School-level information is available on each of these indicators. However, the lack of student-level data prevented researchers from averaging the ACT and SAT figures at the student level; hence, the statistical significance of the averages of the schools' averages could not be determined. Moreover, because these tests are voluntary, different shares of students from every school take these exams. From the public data, it was not possible to determine if a larger share of students from schools with lower average SAT/ACT test scores took these exams than was true for schools with higher average scores. Given these caveats, further research would need to be performed to properly interpret the meaning of differences in average test scores for these schools.

Researchers summarized this data by splitting all study schools in the Central Texas region into two roughly equally groups, those whose student body is less than 40 percent economically disadvantaged⁹, and those whose student body is greater than 40 percent economically disadvantaged. Two types of statistical comparisons were then performed, one between these two groups of schools and the other comparing each group of Central Texas schools to the mean performance of other Texas schools with similar demographics (commonly known as campus group means).

⁹ According to the TEA, "the percent of economically disadvantaged students is calculated as the sum of the students coded as eligible for free or reduced-price lunch or eligible for other public assistance, divided by the total number of students" (TEA, 2005). In this report, we will also use the term *low-income* to identify this group of students.

The results from this analysis are displayed in Table 6. Schools in the Central Texas region with less than 40 percent low-income students performed, on average, noticeably better than their campus group means on all of the proxy factors researched.¹⁰ Schools in the region with more than 40 percent low-income students performed worse on average than their campus group means on all factors except those dealing with AP classes and scores.

Detailed analysis shows that were it not for Johnson (LBJ) High School,¹¹ a magnet school in Austin ISD containing more than 45 percent low-income students, the Central Texas schools with more than 40 percent low-income students would have underperformed all of their campus group means. Because of LBJ’s magnet program, this group outperformed their campus group means in two proxy variables, the percent of students taking AP/IB courses and the percent of students who were successful in AP/IB courses.

Table 6. Comparison of Central Texas School to Schools with Similar Demographics on Key Variables Associated with Postsecondary Success

Academic Background Factor Affecting College Transitions	Proxy Variable	<40% Low-Income		>40% Low-Income*	
		Central Texas Schools	Other Texas Schools	Central Texas Schools	Other Texas Schools
Number of AP classes available	AP/IB (% Taking)	33%	16%	23%	14%
AP test score	AP/IB (% Successful)	63%	49%	30%	27%
SAT score**	SAT School Average	1076	1016	884	908
ACT score**	ACT School Average	22	21	18.2	18.6
TAKS test scores	TAKS All Exams (% Failing)	19%	24%	47%	41%
Number of math classes taken	TAKS Mathematics (% Failing)	10%	14%	33%	26%

Data source: AEIS 2004-05

Notes: For these calculations, Garza Independence High School in Austin ISD was dropped due to insufficient data.

* Tabulation includes LBJ High School, which houses an academic magnet school that serves students from across Austin ISD.

** It was not possible to determine the shares of students taking these exams in these school groups.

¹⁰ Campus group means match schools to others in Texas using demographics including the percent of low-income students at the school.

¹¹ Although this high school is listed as Johnson High School in state reports, it is called LBJ High School locally.

School-Based Initiatives

In the past several years, the Central Texas school districts in this study have developed a number of initiatives aimed at improving college preparedness and graduation rates for low-income students. Three examples of such programs that are operating in the Austin ISD are GEAR-UP, AVID and Project SOS:

- GEAR-UP (Gaining Early Awareness and Readiness for Undergraduate Programs) is a partially federally-funded organization that follows and tutors cohorts of students from 7th grade through high school graduation. Students are encouraged to visit colleges and take classes with rigorous curricula.
- AVID (Advancement Via Individual Determination) targets average students who need extra guidance and support to take more advanced courses and better prepare for college. AVID provides students with an elective course focusing on study aids, counseling and tutoring.
- Project SOS (Supporting Optimal Scholarship Advanced Placement Incentive Program) is an Austin ISD effort funded by the U.S. Department of Education to identify and eliminate the variables that prevent high-ability, low-income students from enrolling in pre-advanced placement and AP courses.

Two examples of programs with similar goals in the Pflugerville ISD (PISD) are Dual Credit and Articulation Agreements:

- The Dual Credit program allows students to take college-level courses and receive both high school and college credit for them. The courses are taught by Austin Community College faculty. During the 2005-2006 school year the district's Dual Credit list increased from 32 courses to 61 courses in a number of areas, including: fine arts, English and other languages, social studies, science, mathematics, and business.
- From 2003 to 2005, PISD moved from zero articulation agreements with ACC to 16 course agreements within seven technical programs. Articulation agreements help students transition from one level of education to another by linking institutions and educational experiences. PISD's articulation agreements with ACC are in a number of career fields, including: agricultural science, automotive technology, business education, health science technology, and engineering design graphics.

It is too early for the full effects from many of these initiatives to be reflected in the public data available for this analysis. In addition, it would be difficult to use such an approach to determine whether improvements in AP enrollment, SAT scores, and college acceptance, enrollment and completion were attributable to these initiatives or other factors

occurring during a similar time period. Formal evaluations that use detailed student data are a better source for judging the success of initiatives such as these.¹²

Analysis of the Transition to Postsecondary Education

The THECB provides data on the Texas colleges and universities that Texas high school graduates attend and publishes an annual report summarizing the number of students from each high school who enroll in specific Texas institutions of higher learning in the fall semester following graduation (THECB, 2005). Although this data source allows users to determine how many students from Texas public high schools enroll in Texas colleges and universities the following fall, the disadvantages of using this public dataset are many: race/ethnic identifiers are not provided, small numbers of students from one high school in a college the following fall are aggregated to prevent disclosure, students who do not immediately attend college following high school but do attend later are not included, and students who enroll in colleges outside of Texas are listed in the “not found” category. Thus, the report underestimates the number of Central Texas graduates who actually enroll in postsecondary education. Even so, this dataset currently provides the most detailed publicly available information on postsecondary transitions for Central Texas graduates.

The following analysis relies on data from the high school graduating classes from the spring and summer of 2004 linked to data on enrollees in Texas two-year and four-year colleges in the fall of 2004. An analysis of this public dataset revealed that:

- Overall, 49 percent of 2004 graduates in four Central Texas school districts enrolled in two-year or four-year institutions during the fall following graduation.
- The rate of high school graduates who enrolled in Texas postsecondary institutions varied significantly by high school, as shown in Table 7.

¹² The Ray Marshall Center is conducting the formal impact evaluation for Project SOS.

Table 7. Class of 2004 Transition Rates to Texas Postsecondary Institutions

Percent Enrolled in Fall 2004					
	Total Texas post secondary	Four year	ACC	Other two-year	Not found
Austin ISD					
Akins HS	44%	22%	21%	<1%	55%
Anderson HS	56%	38%	13%	3%	44%
Austin HS	51%	34%	12%	2%	49%
Bowie HS	66%	43%	19%	3%	34%
Crockett HS	39%	20%	16%	1%	61%
Garza HS	25%	7%	16%	1%	75%
LBJ HS	69%	37%	7%	1%	54%
Johnston HS	39%	14%	14%	3%	68%
Lanier HS	27%	18%	7%	2%	71%
McCallum HS	43%	26%	14%	3%	56%
Reagan HS	30%	15%	11%	4%	67%
Travis HS	21%	12%	7%	2%	77%
Del Valle ISD					
Del Valle HS	24%	10%	8%	5%	75%
Round Rock ISD					
Mc Neil HS	51%	33%	15%	3%	47%
Round Rock HS	57%	38%	14%	5%	42%
Stony Point HS	44%	30%	9%	5%	54%
Westwood HS	55%	41%	12%	2%	43%
Pflugerville ISD					
John B. Connally HS	51%	31%	18%	2%	47%
Pflugerville HS	50%	30%	15%	5%	47%

Data source: THECB, 2005; Totals may not equal 100 percent due to rounding.

A detailed regression analysis of the factors that led to these school-based differences in rates of enrollment in college could not be performed due to technical limitations of the public data file. However, the relationship between some key variables and post-secondary enrollment can be visually displayed through summarizing the available data. As mentioned earlier, one factor that affects student transitions is the socioeconomic profile of a school (USDOE, 2005). Table 8 displays postsecondary transition rates by high school based on the share of low-income students in each high school.

Table 8. Percent of Low-Income Students and Texas College Transition Rates by High School

High School	Low-income share of student body, 2003-04	Rate of enrollment in Texas postsecondary education, fall 2004
Bowie HS	7%	66%
Westwood HS	7%	56%
McNeil HS	10%	53%
Anderson HS	13%	56%
Round Rock HS	20%	58%
Pflugerville HS	20%	50%
Austin HS	26%	51%
McCallum HS	26%	44%
Stony Point HS	31%	45%
John B Connally HS	33%	51%
LBJ HS	45%	46%
Gonzalo Garza HS	45%	25%
Crockett HS	48%	39%
Akins HS	51%	44%
Del Valle HS	60%	24%
Lanier HS	74%	29%
Reagan HS	77%	32%
Travis HS	78%	22%
Johnston HS	80%	32%

Data sources: AEIS 2003-05, THECB data 2005.

Note: This table only includes enrollment in two-year or four-year colleges in Texas in the fall semester following high school graduation. The THECB data source does not include out-of-state postsecondary enrollment or enrollment in the spring of 2005.

Austin ISD contains both the schools with the highest and the lowest percentage of students attending college in the state of Texas in the fall semester following graduation. Generally the schools with the lowest percentage of low-income students had the highest college transition rates, while the schools with the highest percentage of low-income students had the lowest college transition rates.

Ideally, researchers could obtain student-level data and perform an appropriate regression model in order to determine how each factor (e.g., student/parent economic status and others) influences the graduate's decision to enter college. While this was not possible from the publicly available data, it is possible to group the Central Texas high schools based

on their share of low-income students and compare postsecondary transition rates for each group (Table 9). This analysis indicates that while rates of college attendance vary for individual high schools, the Central Texas schools with a high share of low-income students send a smaller share of their graduates to Texas postsecondary institutions than schools with populations that are more affluent.

Table 9: Comparison of Texas College Transition Rates for Central Texas Region Schools and their Campus Groups

	Schools with >40% Low-Income		Schools with <40% Low-Income	
	Central Texas	Other Texas Schools	Central Texas	Other Texas Schools
4-year	20.59%	18.88%	36.21%	28.74%
Community College/ 2-year	14.75%	23.80%	18.40%	26.50%
Not found	64.66%	57.31%	45.39%	44.76%

Data source: THECB data, 2005

Overall, the four Central Texas school districts in this study enrolled 49 percent of their 2004 high school graduates in Texas postsecondary education in the fall semester following high school graduation. However, as was true in the analysis of academic success factors, Central Texas schools serving a high share of low-income students performed less well than schools with similar demographics in sending their graduates on to further education after high school. Table 9 also shows that only 35 percent of graduates in low-income Central Texas schools continued with their education compared to 43 percent of similar schools throughout the state. Other Central Texas schools enrolled 55 percent of their graduates in Texas postsecondary institutions, a rate comparable to their peer high schools throughout Texas.

Regardless of their share of low-income students, schools in Central Texas sent a smaller share of their graduates to community colleges and two-year institutions than similar schools throughout Texas; however, Central Texas schools sent a greater percentage of their students to four-year institutions than their peer schools across the state. Graduates

categorized as “not found” include students who did not attend any college the fall following graduation and students who attended a public or private institution outside the state of Texas.

As mentioned above, this analysis only includes enrollment for 2004 area high school graduates in Texas colleges and universities in the following fall semester. Austin ISD researchers have been able to access additional non-publicly available data sources to supplement this database. By adding data sources for spring 2005 enrollment and out-of-state enrollment, those researchers have found higher college enrollment rates for Austin ISD than the rates calculated solely from the public THECB data. (AISD, 2006) Data Center researchers plan to use a similar approach for all participating school districts in future years of this research project.

Central Texas school districts have begun participating in fairly sizable initiatives aimed at improving rates of postsecondary enrollment for their graduates.

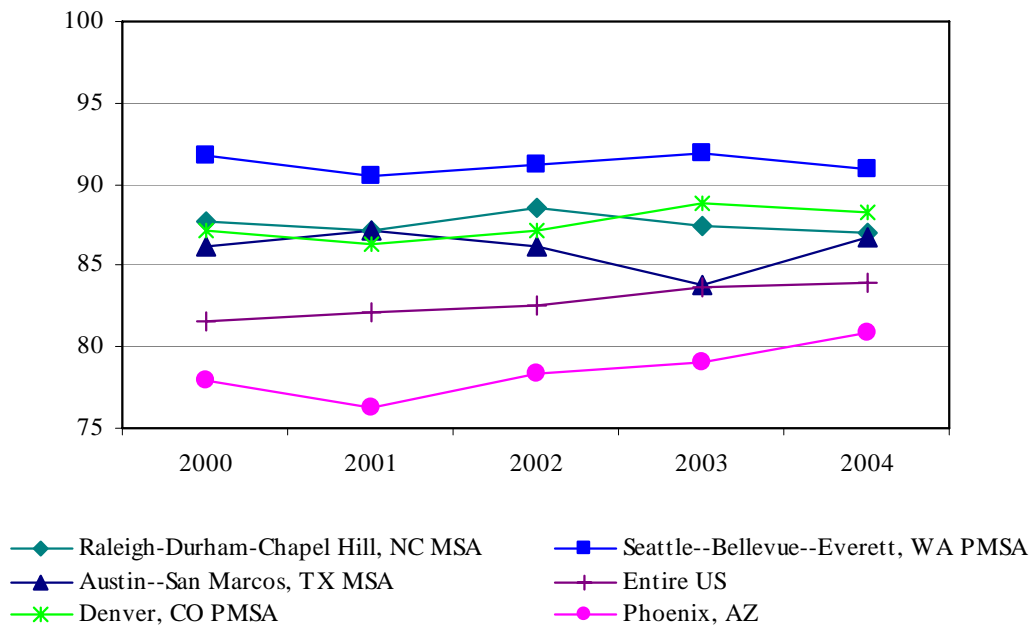
- Project ADVANCE is a college readiness initiative of Austin ISD designed to help students with every phase of their transition to college. College advisors are placed on high school campuses to assist students with college admissions, financial aid, college visits and other aspects involved in postsecondary transitions.
- Austin, Pflugerville, and Del Valle ISDs have partnered with Austin Community College (ACC) to provide college entrance services to 12th graders. Through the College Connections program, ACC provides the following:
 - Application for admissions
 - Financial aid/career counseling
 - Orientation/advisement/assessment
 - A letter of acceptance for participating graduates from ACC in their graduation packet on high school graduation day.

The analysis of publicly available data does not provide enough detailed information to learn whether or not these initiatives are having the desired effect.

Comparison of Educational Attainment Trends for Austin MSA to Other MSAs

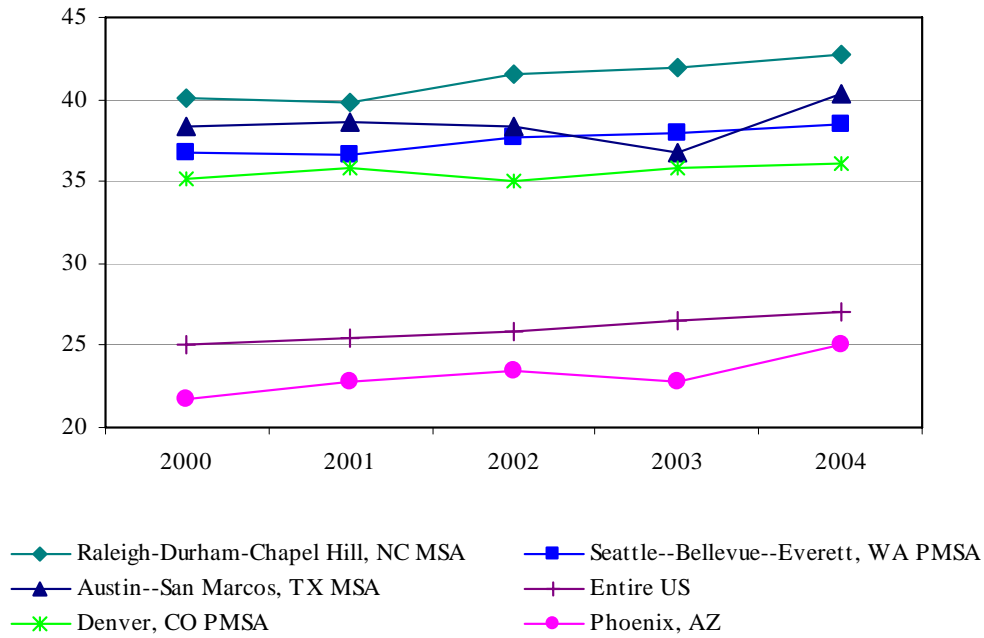
In an increasingly competitive and mobile marketplace, Central Texas competes to obtain and retain an educated workforce. One critical component in maximizing talent and intellectual capacity for this geographical area is to channel energy into effective educational programs for its high school population. The figure below uses Census Bureau data to compare the Austin MSA to other MSAs with which Austin competes, as benchmarked by Market Street Services (2003). Figures 2 and 3 compare the percentage of residents over the age of 25 who have completed high school as well as those with a college diploma. The graphs indicate that 80 percent of the populations of all competing MSAs except Phoenix have a high school education or better, and 35 percent of the populations of most MSAs except Phoenix have a bachelor's degree or higher. Except for Phoenix, however, most of the differences among MSAs are within the margin of error reported by the Census Bureau.

Figure 1. Percent of MSA Residents with a High School Diploma or Higher Level Education



Data source: U.S. Census Bureau, 2000-2005

Figure 2. Percent of Residents of MSA with a Bachelor's Degree or Higher



Data source: U.S. Census Bureau, 2000-2005

What is notable about these graphs is not the difference between MSAs, but the lack of difference. While all of these geographical areas have more educated populations than the United States as a whole, this graph indicates that Austin’s educational attainment is comparable to but not any better than the educational attainment levels in many of its competing MSAs.

Several factors are most likely contributing to the minor fluctuations in the average level of educational attainment in Austin. First, following the economic downturn in the high-tech industry in 2000-2001, many well-educated adults left Austin for cities with a stronger job market. Also, the steep decline in the share of adults with a high school diploma or higher is probably related to the rapid increase in the share of Hispanic students in local school districts discussed earlier in the text. Although this chart represents includes only adults over 25 years old, Hispanic adults — particularly recent immigrants from Central or South America — typically have far lower educational attainment levels than native-born Americans of all backgrounds.

As with the earlier analyses, the public data can identify statistical trends but cannot give a clear picture as to why these trends are occurring or whether current efforts to reverse these trends are successful. The data reported are two years old. Since that time, Austin's economy has improved significantly. Also, the Greater Austin Chamber of Commerce, along with other groups in the region, has begun a number of initiatives to reverse the trends shown in these charts. For example, the Greater Austin Chamber of Commerce's *Opportunity Austin* program began in September 2003 as a five-year effort to, in part, enhance the effectiveness of regional workforce and education programs in order to bolster Austin's economic competitiveness. It is not yet clear how those efforts will affect Austin's educational attainment trends in future years.

Chapter IV. Pilot Survey of Central Texas 2005 High School Graduates

The second major research activity from the first year of the Data Center's operations was the development and pilot implementation of the high school student senior survey. In future years, this survey will be conducted with seniors in participating school districts immediately prior to their high school graduation. However, due to the time needed to conduct the start-up activities for a survey of this type, the survey of 2005 seniors was conducted in the summer after their high school graduation.

Purpose of the High School Survey and Research Questions Addressed

Once the project is fully implemented, the annual high school senior survey will serve two major purposes:

- 1) To ask background questions about the students' family backgrounds, lives in high school and plans for further education, as well as additional information that is not contained in administrative databases; and
- 2) To obtain contact information from the students for future follow-up surveys.

During this first year, the survey had another purpose, which was to test the wording of survey questions, implementation procedures and the usefulness of the reporting format for participating districts.

This survey is necessary to start answering the research questions detailed earlier in the report because the administrative data analyzed in the previous section does not capture many of the student-level background factors needed to determine why Central Texas high school students make their decisions regarding additional education and training. The major outcome this survey tracks is whether or not the high school graduate is going on to college; however, the survey also asks what the graduate is planning to do if not going to college.

Survey questions were developed to seek information about many aspects of the Central Texas high school experience and graduates' perceptions of how their experiences both inside and outside of school helped to influence what they do after high school. The survey also identifies the specific ways in which different school districts work to prepare their students for postsecondary education and how useful students felt these activities were. Finally, because the survey collects background demographic information, the survey can

determine how students' experiences and preparation vary for different population groups within Central Texas high schools.

Research Methods

To develop the survey, Ray Marshall Center researchers conducted three main tasks: a literature review (described in Chapter 2), a review of prominent high school surveys and focus groups of Central Texas graduates. These tasks helped to identify the background factors that influence a graduate's success beyond high school, which questions to ask on the survey and how to ask them. The resulting survey questions cover three major topics: the family backgrounds of respondents and identification of major influences on graduates' decisions about their futures; graduates' participation in high school activities, studies and work; and methods that school districts used to prepare students for life after high school. More details about the survey development and summer focus groups are contained in Appendix A, the complete list of variables considered for possible analysis is contained in Appendix B and the survey instrument is contained in Appendix D.

Due to the limited time available to recruit school districts and develop the 2005 survey, the initial survey was administered in the summer following high school graduation instead of during the school year. Students who authorized school districts to release their directory information and were over 18 years old at the time of the survey were invited to participate in the survey through a mass mailing and follow-up phone calls.¹³ The survey was primarily conducted via the Internet.

The survey analysis first describes the demographic characteristics of survey respondents and compares their profiles to those of the entire population of graduates. Then, the selected survey topics are analyzed for all graduates who responded to the survey and for selected groups of the entire survey population. Specific detailed analyses include the identification of large differences between graduates planning to go to college from those not planning further education. The next section investigates how different school districts helped prepare students for life after college. The final section explores differences in those

¹³ This summer survey was restricted to graduates who were over 18 years old to eliminate the need to gain parental permission for graduates' participation. Future surveys will include seniors who are not yet legally adults.

factors that are influential on the decision to go to college among various demographic groups. These demographic groups sort respondents based on the following characteristics:

- Attended low-income schools (defined as schools in which over 40 percent of students are from families that received food stamps, were on TANF, or participated in the free or reduced-price meal program);
- Came from low-income families;
- Have different racial and ethnic backgrounds;
- Gender; and
- Have parents with different levels of educational attainment.

To determine which factors are associated with influencing successful transitions for different population groups, researchers used their best judgment as to whether or not there was a high variance in how students answered each item within each group. Due to the small sample size, statistical tests of differences between groups could not be performed in 2005 but are planned for future years. More details about specific statistical methods used to analyze the survey are in Appendix A.

There are several limitations to the survey administration approach used in the initial survey. Attempting to contact high school graduates in the summer after graduation resulted in a low response rate and an insufficient number of respondents in certain population groups to conduct any analysis for those groups. Also, the respondents of this initial survey may not be representative of their entire graduating classes, which makes it difficult to determine the relative importance of factors leading to successful transitions. In future years, the survey will be administered at school in April or May of the students' senior year to overcome these inadequacies in the administration. Other limitations and plans to deal with them are discussed more fully in Appendix A.

This initial survey does reveal considerable variation among the survey respondents that certainly reflects the diversity of the larger population from which they were drawn. This diversity in both the characteristics and experiences of these graduates is highlighted in the following analysis of the initial survey and used to draw conclusions that will guide future work.

Summary of Findings from 2005 Pilot Survey of High School Graduates

The summer survey of recent 2005 Central Texas high school graduates collected information about graduates' future education and work plans. The survey also included

questions on family background influences on student decision-making, graduates' high school experiences and their college preparatory activities. Information on these topics is typically not available from existing administrative data records maintained by local school districts.

A total of 235 graduates from the Austin, Del Valle, Pflugerville and Round Rock school districts responded to this pilot survey. Respondents represented eight percent of graduates in these school districts for whom valid addresses and telephone numbers were available. While survey respondents may not be representative of all Central Texas high school graduates, results from this initial survey illustrate a range of student backgrounds and experiences that reflect the diversity of both the students and the schools participating in this pilot. Selected findings in the key topics covered by this survey are summarized below.

Family background/influences

- Central Texas high school graduates come from a wide variety of different socioeconomic backgrounds.
- The largest influence on all respondents' future decision-making was their own ideas, followed by what parents/grandparents thought. Teachers' suggestions ranked fairly low on almost all of their decision-making processes. Differences in influences and expectations occurred between college-bound and other students, and among students from different income backgrounds.
- In general, parents of most respondents encouraged them to go to college and expected them to do so. Many students listed their parents, families and relatives as the most helpful persons in preparing them for college, especially those with well-educated parents. Respondents who planned to go to college stated that their parents were more involved in their education than did other respondents.

High school experiences

- Most respondents (over 89 percent) participated in some type of extracurricular activity, whether that activity was inside of school or outside of it. The range of activities in which graduates participated was wide and included many types of non-classroom activities (e.g., community service activities, volunteering for faith-based or charitable organizations.) College-bound students tended to participate in sports or service-oriented activities while more non-college bound respondents participated in music.
- Many students worked while attending high school. Six out of every ten respondents worked, with Hispanics and women working more than other students. Typically, students who worked more reported studying less. However, Hispanic students reported higher levels of both work and studying than either White or African-American students. Asian students reported studying more and working less than any other group

Preparation for life after high school

- Altogether, 93 percent of students met with a school counselor for a variety of reasons. Different groups of students reported meeting about various topics (such as help with financial aid, class choice, academic performance and life after graduation) at differing rates.
- Respondents' perceptions of how well their high schools, high school staff members and classes prepared them for life after high school varied widely across districts and different racial and gender groups. In general, African-Americans felt that their math skills were less-well developed than graduates from other groups. Female respondents felt less prepared in social studies, science and mathematics than male respondents.
- To prepare for life after high school, 70 percent of respondents applied for some sort of financial aid, and 59 percent completed FAFSA. Asian and Hispanic graduates had difficulty understanding the financial aid process. Women and men applied for different types of aid, and students attending low-income schools found school staff more helpful with the financial aid process.
- Graduates not planning to attend college cited insufficient financial resources as the primary reason for that decision.
- Respondents from well-educated families felt that their technology skills were better developed than other respondents. These graduates also participated in more activities to prepare them for further education.

Detailed Findings from 2005 Pilot Survey of High School Graduates

Characteristics of Survey Respondents

A total of 235 graduates from the Austin, Del Valle, Pflugerville and Round Rock Independent School Districts, eight percent of students with valid addresses and telephone numbers, responded to this pilot summer survey. Table 10 shows the demographic characteristics of these survey respondents and Figure 3 compares the demographics of survey respondents to those of the entire graduating classes from which they were drawn.

Table 10. Demographic Characteristics of Survey Respondents

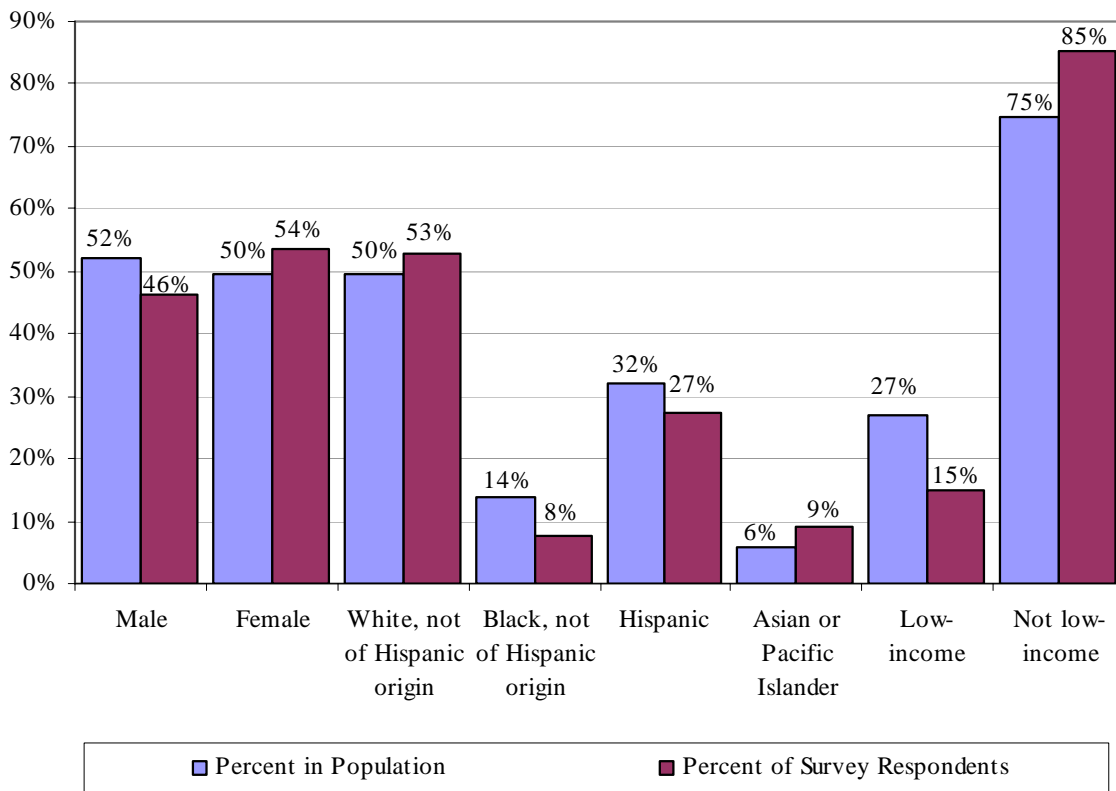
	Number	Percent of Total
TOTAL	235	100%
Race/Ethnicity		
Asian or Pacific Islander	21	9%
African-American	18	8%
Hispanic, Latino, of Spanish Origin	64	27%
White or Caucasian	124	53%
Other	8	3%
Gender		
Female	126	54%
Male	109	46%
Income Status		
Not low income	200	85%
Low income	35	15%
College Intention Status		
Not going to college	21	9%
Going to college	214	91%
District		
Austin	127	54%
Del Valle	16	7%
Pflugerville	36	15%
Round Rock	56	24%
School Income Status		
Not low income	165	70%
Low income	70	30%
Mother's Education Level		
Less than associate's degree	122	52%
Associate's degree or higher	113	48%

Data source: Survey of 2005 Central Texas high school graduates

Some of the groups captured in this survey were more representative of all 2005 Central Texas high school graduates than others. For example, the shares of responses for male and female graduates were fairly close to the shares of all male and female graduates in the four participating school districts. However, this survey clearly under-represents both

low-income students and students not going onto college. Low-income students make up 26 percent of the student population in these ISDs, but only made up 15 percent of the survey respondents. Although it is too early to know what share of 2005 graduates go on to college, the THECB data analyzed in Chapter 2 showed that the rate for 2004 graduates was far less than the 91 percent of survey respondents who identified themselves as college-bound. Also, results for some groups of respondents are based on small sample sizes (e.g., noncollege-bound, African-American and Del Valle school district respondents), making it more difficult to analyze how representative their responses are.

Figure 3. Total Population Compared with Surveyed Population, by Demographic Group

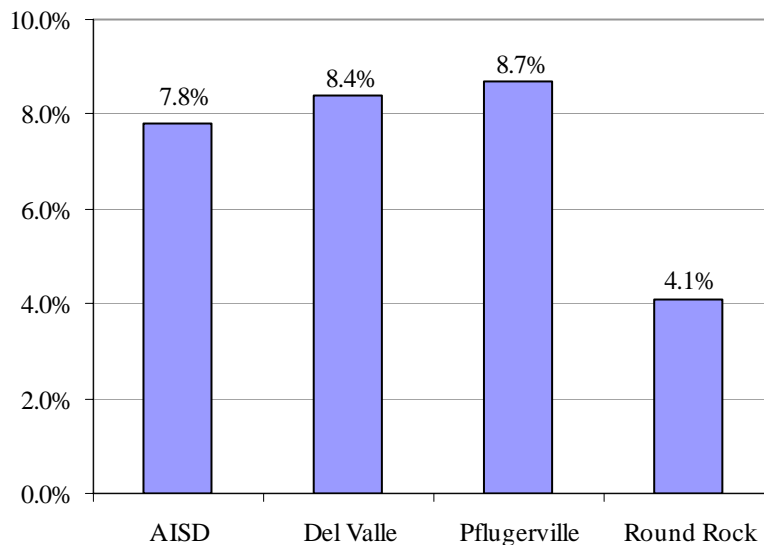


Data sources: Survey of 2005 Central Texas high school graduates; demographic information provided by Austin, Del Valle, Pflugerville and Round Rock ISDs.

Students from each of the four school districts responded at relatively similar rates (Figure 4). Although only a small number of respondents (16) were from Del Valle, that school district had the highest initial response rate (8.4 percent). Round Rock ISD’s low rate is partially attributable to the late date (August 17, 2005) that the Data Center received

contact information for these graduates. Data from this school district also had to be excluded from the eight percent adjusted response rate based on valid addresses and telephone numbers due to insufficient time to complete follow-up telephone calls. See Appendix A for details.

Figure 4. Response Rate by District



Data source: Survey of 2005 Central Texas high school graduates

Analysis of Survey Results for All Respondents

Although this analysis focuses mostly on differences among respondents from demographic groups and school districts, the survey also illustrates the range of experiences among the general population of Central Texas high school graduates (Table 11). In general, families played a large role in graduates' plans for the future. Parents of respondents encouraged them to go to college and expected them to do so. Many groups listed their parents, families, and relatives as the most helpful person in preparing graduates for college. The largest influence on all of the subpopulations' future decision-making was their own ideas, followed by what parents/grandparents thought, while teachers' suggestions ranked fairly low on almost all of their decision making processes.

Throughout their high school experience, most of the respondents (over 89 percent) participated in some type of extracurricular activity, whether that activity was inside of school or outside of it. The range of activities in which they participated was wide and included many academic and nonacademic activities. In addition to these activities, many

students worked while they attended high school. The survey indicated there was an inverse relationship between work and school, where students who worked more studied less.

To prepare for life after high school, Central Texas graduates participated in many different activities. Altogether, 93 percent of students met with a school counselor for a variety of reasons; these meetings included topics such as help with financial aid, class choice, academic performance and life after graduation. Most respondents (84 percent) took college entrance tests such as the ACT, SAT, SAT II, or the Texas Higher Education Assessment (THEA). Four of every five respondents submitted an application for college or advanced job training. To make it through these programs, 70 percent applied for some sort of financial aid and 45 percent will be borrowing money for college.

Table 11. Key Survey Results for All Respondents

Survey Topic	Total
	N=235
Family background and influences	
Parents were active in education	81%
Parents encouraged to pursue further education	97%
Other family members encouraged to pursue further education	89%
Expected to go to college throughout high school	93%
Average response - Scale 1 (most) to 10 (least)	
What my parents/grandparents think	3.4
My own beliefs and ideas	2.4
What my teachers suggest	6.2
High school activities	
Participated in school based extra-curricular activities	89%
Participated in non school based extra-curricular activities	84%
Worked while in high school	60%
Preparation for life after high school	
Met with school counselor	93%
High school staff prepared them well to meet college and career goals	63%
Took college entrance tests	84%
Submitted college or training applications	80%
Applied for financial aid	70%
Completed FAFSA	59%
Will be borrowing money for college	45%

Data source: Survey of 2005 Central Texas high school graduates

Note: These responses are not necessarily representative of all graduating seniors from participating school districts.

Analysis of Survey Results for Key Population Groups

In addition to reporting survey responses for all graduates who took the survey, it was possible to analyze these responses for different groups of respondents. The following sections describe how the responses to survey questions varied between college-bound and noncollege-bound graduates, and among different school districts. Responses are also analyzed for graduates from: schools and families of different income levels, different racial and ethnic backgrounds, gender and parents with different levels of educational attainment.

College-bound vs. Noncollege-bound Graduates

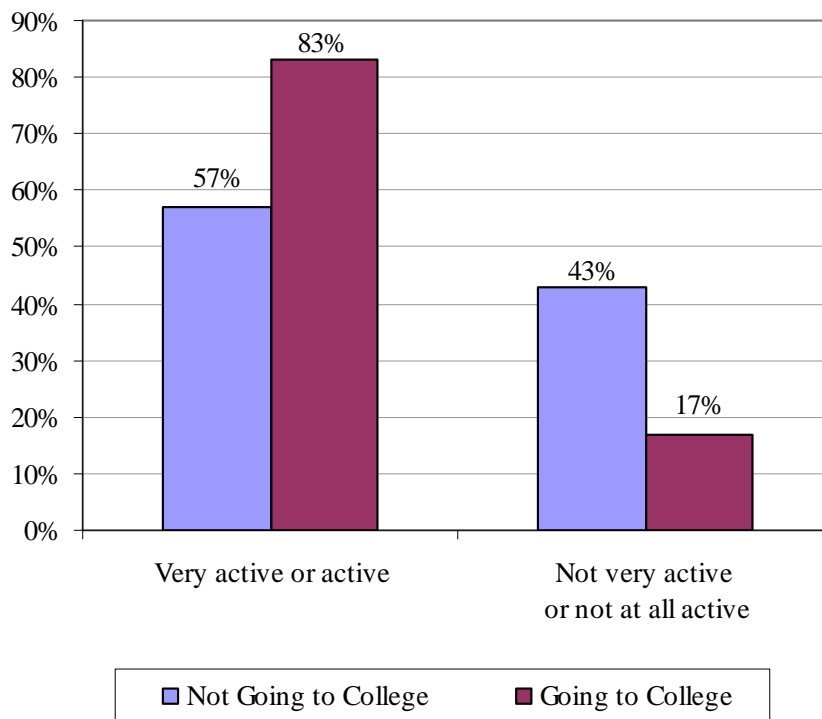
As mentioned above, the share of noncollege-bound students who responded to the survey was smaller than the estimated share of noncollege-bound students in the entire population of graduating seniors in the participating school districts. Results from the following analysis are true for survey respondents but may not represent actual differences between all college-bound and noncollege-bound graduates in these districts. Determination of whether the differences reported in this section are also true for all Central Texas high school graduates will be made after the 2006 survey is administered to a larger group of students.

In comparing the differences in the personal and family backgrounds of college-bound and noncollege-bound graduates, two factors seem to distinguish these two groups from each other: the degree of parental involvement in graduates' education and graduates' own expectations. Regardless of whether they themselves went to college, parents overwhelmingly encouraged their children to pursue further education or training after high school (98 percent of college-bound and 91 percent of graduates not planning to attend college). However, as shown in Figure 5, a far larger share of graduates going to college reported that their parents were "active" or "very active" in their education (83 percent compared to only 57 percent for noncollege-bound graduates). Also, more than four in ten (44 percent) college-bound students cited their family (parents/family/ relatives) as the people who helped them the most when preparing to apply for college. Only 27 percent of noncollege-bound students felt similarly. Finally, more of the parents or families of college-bound students attended a college financial aid event for their children. A total of 44 percent of college-bound students reported that somebody in their family attended one of these events, either on or off campus, compared to only 33 percent of families of students not

planning to pursue additional education. Table 12 summarizes the key differences in responses for each group.

Graduates who were going on to college also had higher college expectations and had believed that they would eventually go to college from a younger age than those who were not college-bound. Throughout high school, 95 percent of college-bound graduates believed they were going on to college, whereas only 67 percent of noncollege-bound graduates believed similarly. Further, 88 percent of those going on to college believed they would go to college before they began high school compared to 67 percent of noncollege-bound graduates.

Figure 5. How Involved Your Parents Are/Were in Your Education



Data source: Survey of 2005 Central Texas high school graduates

College-bound and noncollege-bound graduates also differed in their study patterns, participation in extra-curricular activities and reasons for meeting with their high school counselors. College-bound students reported being much more diligent in their study habits. Nearly 44 percent of these graduates spent six or more hours per week on homework outside of class compared to only 29 percent of noncollege-bound graduates. While both populations participated heavily in extracurricular activities, the types of activities varied between the two groups. The most common activity among noncollege-bound graduates was music while

sports and service clubs were most common for college-bound respondents. Both groups of students met with their counselors on a wide variety of issues. However, only 62 percent of college-bound students met with their counselors about their high school graduation plan, compared with 82 percent of their noncollege-bound counterparts. Also, a larger share of graduates not planning to attend college met with their counselors about poor academic performance — 41 percent of these students met with a counselor about their grades compared to only 12 percent of college-bound students.

Table 12. Comparison of Survey Responses for College-Bound and Noncollege-Bound Respondents

Survey Topic	College-Bound	Noncollege-Bound
	N=214	N=21
Family background and influences		
Parents very involved in education	83%	57%
Parents encouraged to pursue higher education	98%	91%
Parents/Family helped most to prepare to apply to college	44%	27%
Expected to go to college throughout high school	95%	67%
Started thinking about going to college before high school	88%	67%
Activities during High school		
Studied > six hours per week	44%	29%
Participated in school-related extra-curricular activities	91%	81%
Of those participating, type of activity:		
Sports	52%	41%
Music	33%	65%
Service clubs	51%	29%
Met with counselor	95%	81%
Of those who met with counselor:		
Discussed poor grades/academic performance	12%	41%
Discussed graduation plans	62%	82%
Preparation for life after high school		
Family participation in financial aid event	44%	33%
Applied for Financial aid	73%	48%
Type of aid (for those who applied):		
Institutional loans	24%	60%
Scholarships	81%	60%
Primary reasons not attending college		
Cannot afford to attend school	n/a-	33%
Need income from working	n/a	43%

Data source: Pilot survey of 2005 Central Texas high school graduates

Note: These responses are not necessarily representative of all graduating seniors from participating school districts.

The final factor that distinguished college-bound from noncollege-bound students was financial aid. As stated earlier, more families of college-bound students went to financial aid events than the families of noncollege-bound students. Also, those going to college applied for different types of financial aid than those not going to college. Eighty-one percent of college-bound students applied for scholarships compared to 60 percent of those not going on to college. Sixty percent of those not going on to college applied for institutional loans compared to just 24 percent of college-bound students.

Finally, the two reasons noncollege-bound students cited most often for not pursuing college were financially related. One-third (33 percent) stated they could not afford to attend school and 43 percent did not plan to go on to college because they needed income from working.

Differences across School Districts

With few exceptions, the high school backgrounds and experiences of survey respondents did not vary by school district. They and their parents had similar expectations, and they participated in extracurricular activities at similar rates. However, graduates did report important differences in how the schools in their districts prepared them for life after high school. All of the school districts provided the 2005 graduates with a wide variety of activities intended to prepare them for college, either individually or with the help of high school staff (including counselors). Respondents differed in their opinions on how helpful these activities were. These results are provided in Table 13.

Across the four districts, 59 to 81 percent completed the Recommended High School Plan, and 39 to 63 percent completed and submitted a scholarship application. In the four districts, 58 to 94 percent of survey respondents met with high school staff members about the financial aid process. Among those who met with staff on this topic, 56 to 93 percent of respondents found the meetings “very helpful.” Far fewer respondents in Pflugerville ISD met with their high school staff for help when applying to college or help with financial aid or met with their counselors about scholarship applications than was true for students in other districts. Graduates who responded to the survey from Del Valle ISD met with their counselors on a wide range of college preparation topics. Respondents in that district reported that their counselors met with them on an individual basis more often than respondents from the other districts.

**Table 13. Comparison of Survey Responses
for Selected Items Across School Districts**

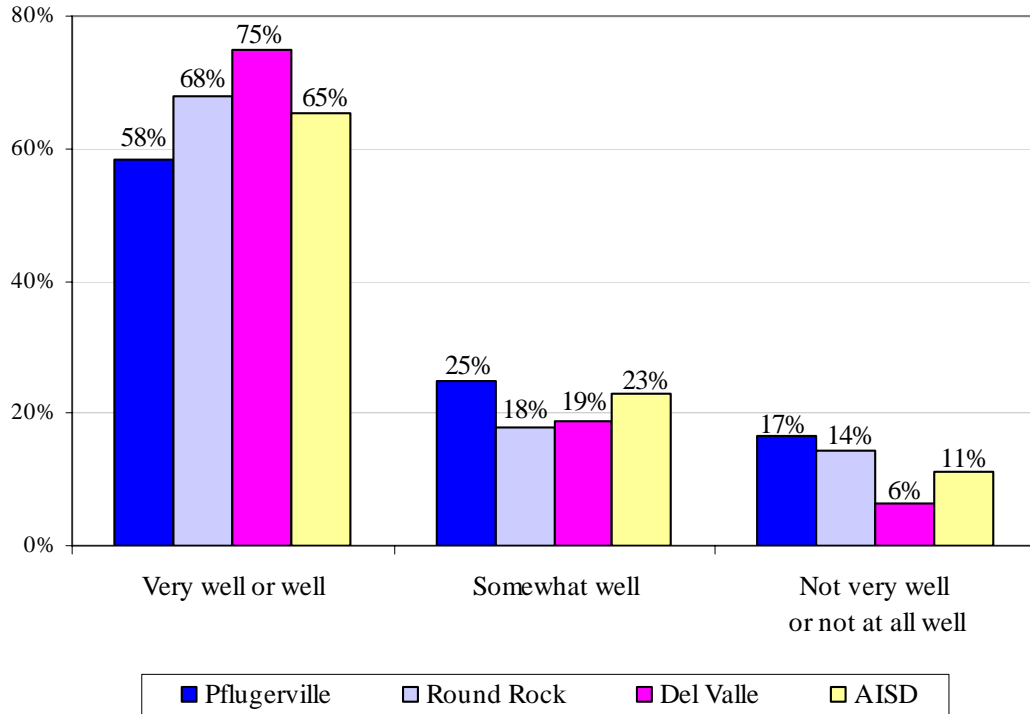
Survey Topic	Pflugerville	Round Rock	Del Valle	Austin
	N=36	N=56	N=16	N=127
Activities completed to prepare for college				
Recommended High School Plan	75%	59%	81%	72%
Distinguished Achievement Program (DAP)	3%	27%	13%	17%
Scholarship application	39%	59%	63%	54%
Applied to Austin Community College	28%	41%	69%	72%
Completed FAFSA	50%	59%	69%	60%
Financial Aid Process				
Met with staff about	58%	61%	94%	77%
Found meeting helpful (of students meeting with staff):	57%	56%	93%	76%
Counselors meetings				
Had meeting with counselors	92%	91%	88%	95%
Of those who met with counselor:				
Found meetings helpful	67%	90%	79%	90%
Had one-on-one meetings	82%	84%	100%	85%
Discussed scholarship information/application	30%	45%	71%	42%
Discussed college information/applications	30%	71%	79%	56%
Feelings about preparation for life after school				
Well prepared to apply to college	58%	68%	75%	65%
Staff not helpful to meet college and career goals	14%	13%	25%	13%

Data source: Survey of 2005 Central Texas high school graduates

Note: These responses are not necessarily representative of all graduating seniors from participating school districts.

Students' opinions differed as to how helpful their districts were in preparing them for life after high school. A majority of students across different districts (58 to 75 percent) believed that they were "well" or "very well" -prepared to apply to college (Figure 6).

Figure 6. How Well Prepared Are/Were You to Apply to College (Whether or Not You Applied)



Data source: Survey of 2005 Central Texas high school graduates

Low-Income Schools

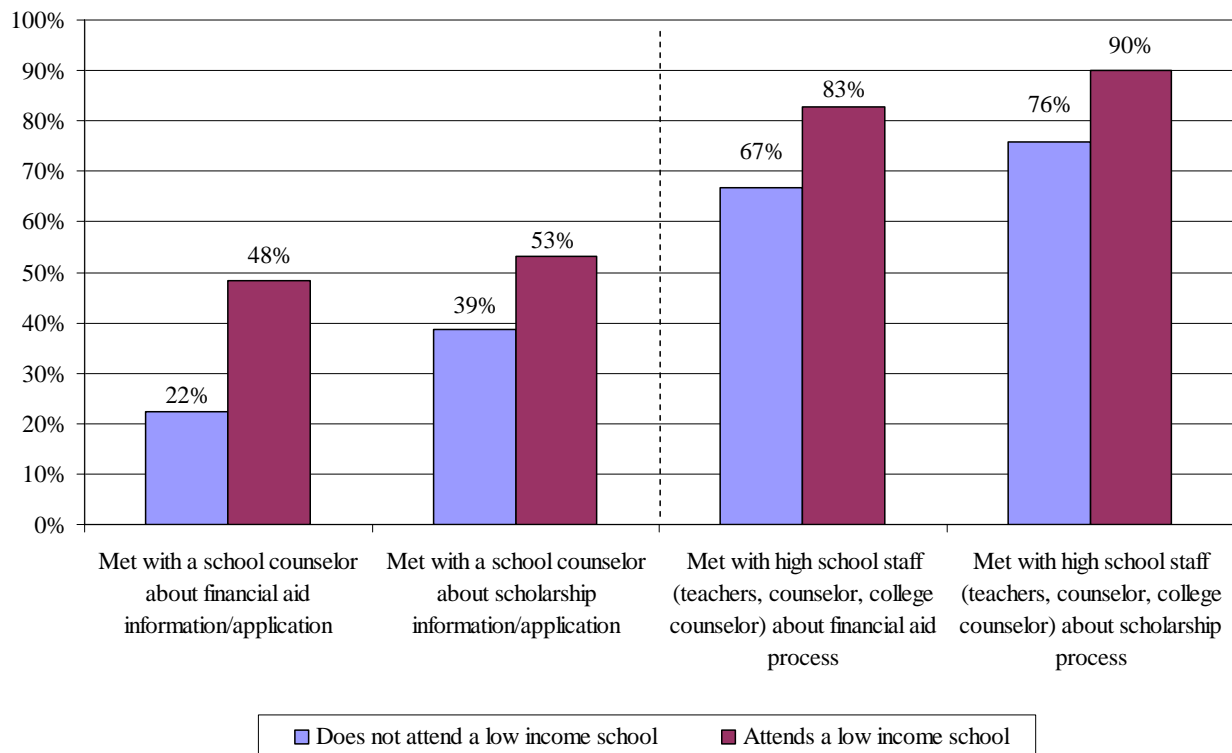
In addition to examining how students from each district differed, this survey also investigated how students attending schools with a low-income population differed from those attending more affluent schools. As stated earlier, low-income schools include those in which over 40 percent of students are from families that receive food stamps or TANF payments, or participate in the free or reduced-price meal program. Roughly half of the schools in this study fall into that group.

Most of the differences between survey respondents who attended low-income schools versus those who attended more affluent schools were expected. In the low-income schools, parents on average had less education, worked in different occupations than parents in more affluent schools, earned lower incomes and tended to be members of a minority group. Another big difference was that, in low-income schools, family members other than parents provided less encouragement to survey respondents about their lives after high school. Also, only 37 percent of students in these schools had thought about college as a

possibility for as far back as they could remember, compared to 58 percent of respondents from more affluent schools.

Respondents in low-income schools perceived their schools as more helpful in informing them about college financing. As shown in Figure 7, almost half (48 percent) of students in low-income schools met with a school counselor about financial aid (versus 22 percent of students in higher income schools); and 53 percent met with counselors about applying for scholarships (versus 39 percent). Of respondents who met with high school staff about financial aid, 86 percent of students in low-income schools, compared to only 63 percent of students in more affluent schools, found meetings with high school staff (teachers, counselor, college counselor) about the financial aid process “very helpful” or “somewhat helpful”. Of course, it is possible that students in more affluent schools may have begun the process with more knowledge on these topics or obtained information from other sources, which could have influenced their perceptions.

Figure 7. Meetings with High School Staff about Financial Aid



Data source: Survey of 2005 Central Texas high school graduates

Families of students who attended low-income schools were less helpful in preparing them for life after high school. Only 32 percent of students in low-income schools stated that their parents/family/ relatives were the “most helpful” people in preparing them to apply to college, compared to 48 percent of students attending more affluent schools.

Low-Income Students

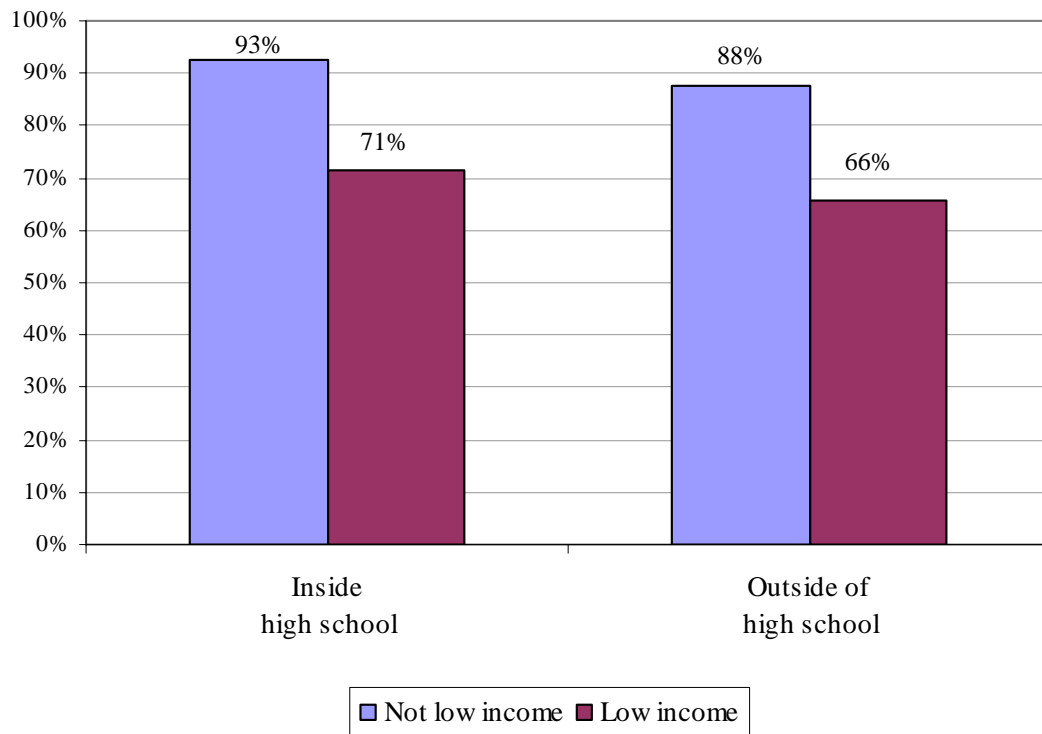
As mentioned above, the share of low-income students who responded to the survey was smaller than the total share of low-income students in the participating school districts. Results from the following analysis are true for survey respondents but may not represent actual differences between low-income graduates and other graduates in these districts. Determination of whether the differences reported in this section are also true for all Central Texas high school graduates will be made after the 2006 survey is administered to a larger group of students.

Not all respondents who attended low-income schools were low-income students nor did all low-income students who participated in this survey attend low-income schools. However, low-income respondents and their more affluent counterparts differed in many of the same ways as graduates from low-income and more affluent schools did. In general, low-income students tended to come from larger families with fewer resources. More than one quarter (26 percent) of low-income respondents had four or more siblings, while only six percent of non-low-income graduates had families of a similar size. Not surprising, families of low-income graduates had less income. Sixty-nine percent of low-income students reported family incomes under \$25,000 compared to only seven percent of those who did not meet the study’s low-income definition.

The high school experiences of low-income graduates also differed from those of other respondents. Low-income students were less likely to participate in extracurricular activities, regardless of whether those activities were sponsored by their high schools or outside organizations (Figure 8). Only 66 percent of low-income respondents reported participating in activities outside of school (such as faith-based charitable organizations, the Red Cross or Special Olympics) while 88 percent of other respondents cited such activities. Low-income students also participated in fewer school-related extracurricular activities. Some 71 percent of low-income students took part in these activities compared to 93 percent of their more affluent counterparts. Among those who did enroll in school-sponsored

extracurricular activities, only 24 percent participated in sports, while 55 percent of graduates from more affluent families played some sort of sport during their high school years.

Figure 8. Participated in Extracurricular Activities



Data source: Survey of 2005 Central Texas high school graduates

Much like students who attended low-income schools, concerns about financial aid for postsecondary education distinguished low-income students from other students. A total of 83 percent of low-income students met with their high school staff (e.g., teachers, counselors, college counselors) about the financial aid process, and 93 percent of those found it “very helpful” or “somewhat helpful.” Only 70 percent of other students met with their staff about financial aid, and 67 percent of them found it helpful. Also, more low-income students borrowed money for college. Fully 63 percent borrowed money for school, while only 42 percent of their more affluent counterparts took out loans for college.

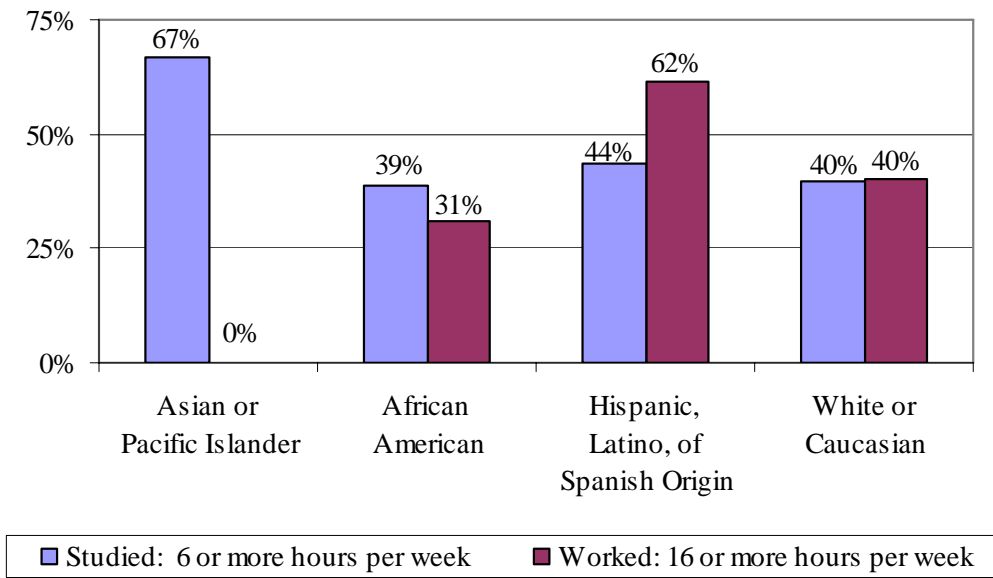
Differences by Racial/Ethnic Backgrounds

As with the previous two populations examined, differences in the socioeconomic backgrounds of different racial and ethnic groups were expected. The survey also found that students from different racial or ethnic backgrounds varied in the amount of time spent

studying and working. While 62 percent of Hispanics said they worked 16 or more hours per week while in school, only 40 percent of Whites, 31 percent of African-Americans and no Asians worked the same amount of time. The research literature (e.g., Stern, 1997) indicates that working more than 15 hours per week tends to have a negative impact both on academic success and on transitioning to college.

Figure 9 compares the share of students working 16 or more hours per week to those studying six or more hours per week. Among Asian respondents, 67 percent reported studying over six hours a week and a majority spent over ten hours a week studying. Only 39 percent of African-Americans, 44 percent of Hispanics and 40 percent of Whites studied for 6 hours or more. However, the amount of time working did not seem to affect Hispanics' work ethic when it came to school work: they not only had the highest percentage who worked more than 16 hours per week but also the second highest percentage of groups studying more than six hours per week.¹⁴

Figure 9. Time Spent Working versus Studying during the Senior Year



Data source: Survey of 2005 Central Texas high school graduates

¹⁴ The pattern of time that Hispanics worked and studied remained when researchers limited this analysis to non-low-income students of all racial and ethnic groups. Therefore this phenomenon is not limited to low-income Hispanics.

Respondents from different demographic groups varied widely in their perceptions of how they much they enjoyed high school and the helpfulness of the school staff. African-Americans differed the most in their views of what they gained from their high school experiences. Only 67 percent of African-Americans “strongly agreed” or “agreed” with the statement that they liked high school, compared to 80 percent of Hispanics, 81 percent of Asians and 70 percent of White students. Of those that met with counselors, only 44 percent of African-Americans felt that their counselors prepared them “very well” or “well” in planning their high school course selection. Among the other groups, 79 percent of Asians and 76 percent of Hispanics and Whites had the same opinion of their counselors. Finally, only 56 percent of African-Americans felt that their math skills were “very well” or “well” developed by their high schools, while 86 percent of Asians, 75 percent of Hispanics and 67 percent of Whites believed their math classes were equally helpful. This finding is especially troubling as Stanford University’s Bridge Project showed that of all high school subjects, “mathematics ... has the strongest continuing influence on bachelor degree completion” (Venezia, 2003).

In preparing for life after high school, respondents from different racial and ethnic backgrounds differed in who they felt helped most in preparing them for college and how difficult it was to figure out their financial aid. White graduates reported that their families were much more helpful in preparing them for college than was true for graduates from other racial or ethnic backgrounds. While 54 percent of White respondents indicated that they were helped most by their “parents/family/relatives” in preparing for college, only 35 percent of Asians, 40 percent of African-Americans and 26 percent of Hispanics felt similarly. Both Hispanics and Asians had difficulty figuring out the financial aid system. Only 16 percent of Hispanics and 19 percent of Asians said that it was “very easy” or “easy” for them or their families to understand the process of financial aid. By comparison, 61 percent of African-Americans and 30 percent of Whites felt similarly.

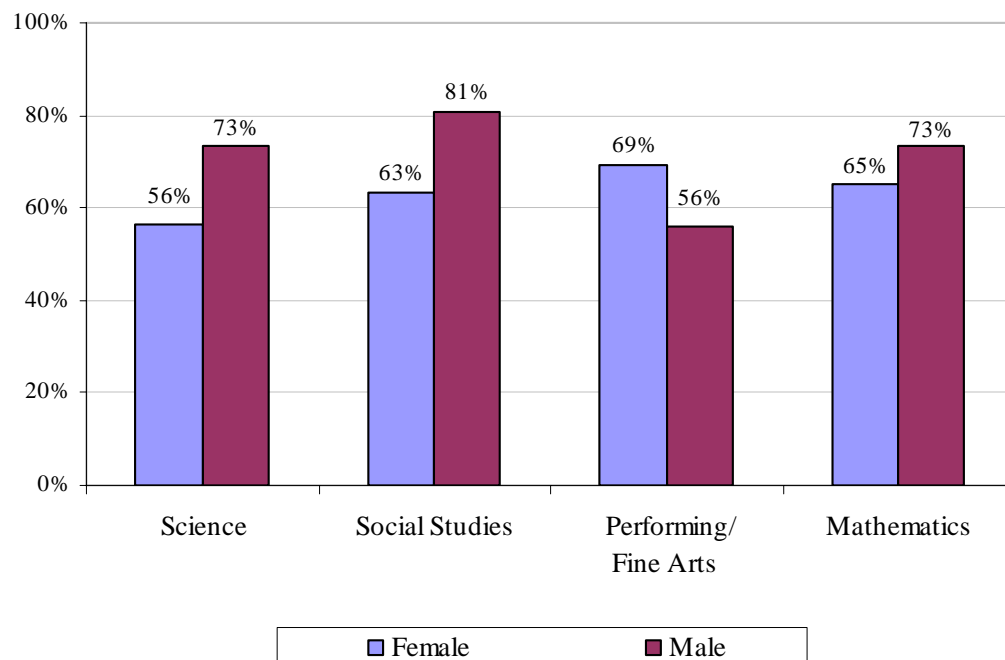
Gender

Unlike the other population groups studied so far, there were few major differences in the family backgrounds of male and female students. Their parents had similar education and jobs, they came from similar economic and ethnic backgrounds and both they and their

parents had similar expectations of their future. However, male and female graduates reported large differences in their high school experiences.

Men and women differed in their workforce participation during high school and in the subjects in which they felt that high school had developed their skills. Women were much more likely to work during high school; among those who chose to work, women tended to work longer hours. While 68 percent of female graduates said they worked in school, only 51 percent of male graduates did. Of those who worked, 48 percent of female graduates worked 16 or more hours per week while they were in school compared to only 40 percent of male graduates. Male and female students also reported different levels of knowledge and skills across academic subject areas. As shown in Figure 10, a larger share of men felt well-prepared than women in science, social studies and mathematics. More women felt well-prepared in the performing and fine arts. In the second year of this project, these perceptions will be compared to actual school performance in these subject areas.

Figure 10. Knowledge and Skills that Your High School Developed Very Well or Well



Data source: Survey of 2005 Central Texas high school graduates

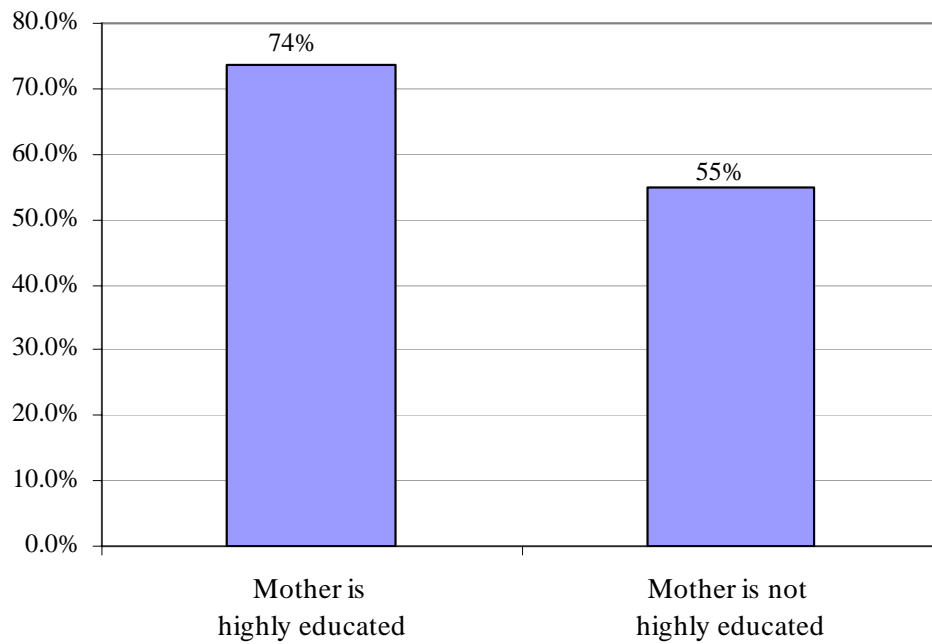
There were few differences between men and women in their plans and preparation for life after high school, though they did seem to apply for different types of financial aid. While 54 percent of men applied for non-institutional loans (e.g., Federal Stafford, Access Loan, A-DEAL), only 36 percent of women applied for the same category of loans. A larger share of women responding to the survey applied for institutional loans provided directly by a college or university (29 percent compared to 23 percent of men).

Educational Attainment of Students' Mothers

Finally, the analysis of the pilot survey explored the differences between respondents whose mothers had attained an associate's degree or higher and those whose parents were less educated. A National Center for Education Statistics' study using the High School and Beyond data cited a mother's education level as a major factor in whether or not students were successful in secondary and postsecondary education (U.S. Department of Education, 1987).¹⁵ Like many of the other populations studied in this report, socioeconomic differences were expected. Parents of graduates whose mothers did not attain a high level of education worked in occupations that paid distinctly lower salaries and tended to be members of a minority group. One high school experience that differentiated these two populations was how well they felt their technology skills were developed. As shown in Figure 11, only 55 percent of students whose mothers were not highly educated felt that their computer technology skills were "very well" or "well" developed by their high school versus 74 percent of their counterparts with more highly educated mothers. This finding should be worrying because teachers in a recent TEA study stated that knowledge and use of technology greatly impacts and motivates students' ability to learn, and thus to succeed in education. (Texas Center for Education Research, 2002).

¹⁵ Although the dominant literature states that it is the mother's educational attainment (and not necessarily the father's educational attainment) that helps to determine whether or not a child transitions into postsecondary education, it would be interesting to compare how a father's education level affected the surveyed graduates. However, due to a small sample size and similarities between the mother's and father's education level of most survey respondents, this was not possible.

Figure 11. Computer/Technology Skills Developed Very Well or Well By Your High School



Note: Highly educated means that a parent had obtained an associate's degree or higher.
Data source: Survey of 2005 Central Texas high school graduates

Graduates with highly-educated mothers participated in more activities to plan and prepare for life after high school than respondents from other families. Among respondents with well-educated mothers, 27 percent completed the Distinguished Achievement Program (DAP), 62 percent completed and submitted a scholarship application and 74 percent submitted a transcript to a postsecondary institution. Only eight percent of graduates whose mothers were not highly educated took the necessary courses to finish the DAP, 46 percent filled out and sent in a scholarship application and 53 percent sent their transcripts to at least one college. Also, graduates with highly-educated mothers said that their families helped them the most in preparing for college far more often than respondents from other families (54 percent vs. 31 percent).

Students from less-educated families relied more on others for financial aid information. To figure out financial aid, 78 percent of students whose mothers were not highly educated met with high school staff about the financial aid process, and 75 percent of that group found it helpful. Only 67 percent of respondents with highly-educated mothers

met with high school staff, and 66 percent found similar meetings about financial aid with their high school staff helpful.

Interpretation of Findings from Pilot Survey

As discussed throughout this chapter, readers should use caution when interpreting findings from this pilot survey. These findings can be used to illustrate the range and diversity of responses among Central Texas high school graduates to questions that are relevant to understanding their future education and labor force decision-making. However, the need to administer this pilot survey in the summer by mail only to graduates over 18 years old whose parents authorized the release of their directory information limited both the sample's size and its scope. As a result, these findings may not represent the universe of graduating seniors from the participating school districts. Plans for administering the 2006 survey to seniors in their high schools prior to graduation should alleviate this concern.

Chapter V. Conclusions, Recommendations and Plans for Future Work

Many factors affect student success in the postsecondary world. Examining the interrelationship of these factors at the individual student level over several years would provide critical information as to which ones are most closely tied to Central Texas graduates' future educational and labor market success. While such a detailed analysis is not possible until the Data Center is fully implemented, some conclusions and initial recommendations can be drawn from the first year of work on this project, which has drawn from an extensive review of the literature, analysis of publicly available data and a pilot survey of high school graduates in four Central Texas ISDs. These conclusions and recommendations are discussed further below, along with a brief discussion of the types of analysis planned for future years.

Conclusions

The literature review, analysis of publicly available data and pilot survey of high school graduates in four Central Texas ISDs were conducted as preliminary steps to the full implementation of the Data Center's research design. In part, the research team was seeking to determine how much could be learned about the factors affecting postsecondary success from the extant literature and publicly available data, supplemented by a small sample of area graduates. Initial findings from these activities are tantalizing but are only pieces of an incomplete puzzle. A reader should be cautious in drawing conclusions solely from the initial graduate survey, given its small sample size and uncertainty over the degree to which it is representative of all 2005 graduates in the participating districts. However, even with these limitations, several conclusions can be drawn from the combined findings of these three separate analyses and used to guide future work.

- 1) **All Central Texas school districts studied are experiencing both rapid growth and significant demographic shifts in their school populations that have important implications for postsecondary success.** Over the past six years, the increase in the number of graduates in Central Texas school districts has ranged from a low of 24 percent (Austin ISD) to a high of 104 percent (Del Valle ISD). And, as the districts have grown, their student bodies have become more diverse: all districts

have experienced substantial increases in their shares of Hispanic and low-income students. Fully 63 percent of Del Valle ISD graduates and 37 percent of Austin ISD graduates were Hispanic in 2004. Given the historical association between minority and low-income student shares and academic performance, these trends are challenging Central Texas districts' success rates.

- 2) **Central Texas high schools with large shares of low-income students lag behind both more affluent Central Texas schools and all Texas low-income schools in preparing their students for and enrolling their graduates in postsecondary education.** Central Texas high schools with more than 40 percent low-income students did worse on average SAT/ACT scores, as well as on TAKS exams than more affluent schools in the region, and they also performed less well than other low-income schools around the state. With the trend to increased shares of minority and low-income students in the region, this is of particular concern. A number of initiatives are underway in the study ISDs seeking to address this problem, including AVID, GEAR-UP, Project SOS, dual credit programs and articulation agreements.
- 3) **All four districts in the pilot study are already making significant efforts to inform students about educational opportunities beyond high school, but use differing approaches to provide students with information about postsecondary education and available financial aid.** One such effort at the high school level is Project ADVANCE in Austin ISD. In addition, ACC's College Connections program is working with seniors in Austin, Pflugerville, and Del Valle ISDs to improve postsecondary enrollment rates. Graduates across the four participating school districts varied widely in their satisfaction with college preparation activities, suggesting that some of these districts can learn from the best practices of their neighboring districts.
- 4) **Family background matters.** It is clear from all sources examined that family background, broadly defined, has been and remains a very important factor in fostering students' postsecondary success. While school-based initiatives and improved curricula can be expected to lead to better postsecondary results over time, family background cannot be ignored. The next few conclusions elaborate on its role.
- 5) **Students from low-income families, and those with less educated parents were less likely to attend college.** This is a consistent finding from the literature and is supported by the other sources that were drawn upon for this analysis. Family income is an important factor in students' postsecondary success, as is the education of their parents. Mother's educational level is a particularly important factor in determining student's future educational aspirations. It is important to note that most school districts currently do not even know parents' educational backgrounds, thus increasing the difficulty of targeting their efforts towards students who would be the first in their families to attend college.
- 6) **The diversity of the family backgrounds in some school districts makes it more difficult for them to satisfy all of their parents and students with their educational services.** If a district does not develop a multi-faceted approach that understands and respects the backgrounds and expectations of *all* of its students and

families, it risks losing its students to adjacent districts that better meet these families' needs. Currently, graduates in the Austin and Pflugerville ISDs face the greatest challenges in this area. As other Central Texas districts become more diverse, they will also face increasing challenges of this nature.

- 7) **Students' perceptions of how well their high schools prepared them for postsecondary education vary by gender and race/ethnicity.** The pilot survey suggests that female students did not feel that their high school developed their skills in science, social studies and math as well as male students did. African-American students generally did not feel that their math skills were as well-developed as students from other racial and ethnic groups. While more data are needed to see if these perceptions hold up once more students take the survey or if these perceptions correspond either to school performance or participation in postsecondary education, school districts should at least be aware these different perceptions may exist among various population groups within their student body.
- 8) **Finally, information gleaned from publicly available data sets and the typical low-response surveys of graduates are not sufficient for a comprehensive longitudinal study of Central Texas high school graduates that will support continuous improvement strategies for education decision makers.** The existing literature is reasonably clear on the factors that lead to postsecondary success, but there are serious gaps in existing data and recent surveys that make it difficult to provide the information needed by education decision makers in the region. The lack of information on mothers' educational attainment levels and the low response rate (around eight percent) for the pilot high school graduate survey are two examples of these shortcomings. Other data shortcomings include the work and schooling patterns of high school and college students and their longer-term postsecondary retention and graduation experiences. Rather than attempting to glean proxy variables from multiple sources to approximate predictors of student success, the fully implemented Data Center will provide a critical storehouse of pertinent, useful and appropriate data to enable better local policy decisions for businesses, local governments and educational institutions.

Recommendations

Although there are shortcomings in the available public data sets and the pilot survey, the broad conclusions presented above are sufficient to support a number of initial recommendations for area school districts, businesses, the community and parents. These somewhat general recommendations are primarily drawn from the research literature and supported by the preliminary data analysis from the first year of this study. More specific and refined recommendations will be developed after all facets of the project are fully implemented.

What Can Schools Do?

School districts should either develop or expand initiatives that improve the college readiness of minority, low-income students and those from less educated families. As mentioned in the report, Austin ISD is participating in several initiatives targeted to schools with large shares of low-income students, many of whom are African Americans and Hispanics, who are a primary focus of various closing-the-gap efforts in the state. AVID, GEAR-UP and other efforts are among these. As results become available, Central Texas districts can learn from both the successes and the failures of these early efforts.

School districts should also work to eliminate high shares of beginning teachers in any one school. These teachers generally are at greater risk for turnover and many have yet to establish an effective teaching style for reaching students. More professional development should go to districts (and schools) with a greater proportion of less experienced teachers.

Additionally, many schools currently do not have enough information about parents' educational backgrounds to determine whether this is influencing a student's likelihood of attending college. One way to address this would be to request this information of students enrolling in a new school and to add this item to the background information collected at the beginning of each school year.

What Can Businesses Do?

Businesses play a key role in assisting with school to college transitions; however, although a number of business efforts have been developed across the U.S., little research has been conducted to verify the success of the various initiatives currently in schools. Given this dearth of research and value to business, it is critical for business to assist researchers in identifying "best practices" that can be replicated to benefit broad, diverse school populations. Businesses and foundations knowing of promising programs may also need to partner with researchers to evaluate the success of existing business initiatives.

What Can The Community Do?

There are also a number of actions that policymakers and the community as a whole can take to encourage greater postsecondary participation and success, based on the results of this analysis. Among these are the following:

- Foster greater support for and collaboration among community-based organizations (CBOs) serving minority, low-income students and those from less educated families. The Central Texas region is fortunate to have an abundance of CBOs which address the needs of these students, including American YouthWorks, Capital IDEA, Communities in Schools and Skillpoint Alliance to name a few. The City of Austin, Travis County and other local governments, as well as the philanthropic community — e.g., the Michael and Susan Dell Foundation, the Bill and Melinda Gates Foundation, the Silverton Foundation, and others — have provided substantial support for these efforts for some time.
- Create school campus/neighborhood association and CBO collaboration on college preparation nights, such as many area churches and faith-based groups have already done and are doing. It is important to recognize that many low-income and minority parents are more apt to attend a meeting at a community center or church over lunch or dinner than they are at a middle or high school. In addition, community groups, as well as schools, should provide messages to students and their parents much earlier — in elementary and middle school, as well as the early high school years — that college is not only possible, but attainable and affordable for them.
- Asian and Hispanic groups should organize financial aid sessions specifically targeted to families who may have difficulty understanding the standard ways in which this information is presented.
- Identify and support additional research to document and access the relationship between students' experiences in education and the world of work beyond high school.

What Can Parents Do?

As this initial analysis has shown, parents are one of the more important focal points for efforts to increase postsecondary success for Central Texas students. It may come as a surprise to some, but students do listen to and often heed the advice of their parents when it comes to such important decisions as whether or not to attend college or technical training or what kind of a career to pursue.

There are a number of steps that parents can take to assist their children in taking advantage of available postsecondary opportunities. Among these are the following:

- Attend and actively participate in college nights and related events held at their schools, churches and community centers.
- Learn about and talk to their children about postsecondary educational opportunities. This is particularly important, but also hardest, for those parents who have not attended college. Alternative approaches will be needed in this area, possibly including a family “buddy” system that pairs families who have and have not attended college.

- Seek ways to expose their children as early as possible to area postsecondary options, including ACC, the University of Texas at Austin, Huston-Tillotson University, St. Edwards University and Texas State University to name just a few.

Plans for Future Work

In the second year of this project, the research team will add other components needed to fully implement Data Center activities. These components, tasks and timelines are described more fully in Appendix A. In years 2-5 — i.e., from January 2006 through December 2009 — the Data Center will annually:

- Add additional school districts to this project to the extent allowed by available financial resources.
- Negotiate and/or renew data-sharing agreements with agencies to gain access to electronic administrative databases used to track educational and workforce progress of individual students for up to four years after graduation.
- Conduct in-school surveys of high school seniors just prior to their high school graduation.
- Conduct follow-up surveys of prior-year graduates approximately one year after graduation.
- Expand research and analysis on students' postsecondary education experiences, focusing on enrollment, achievement, retention and completion.
- Provide longitudinal portraits on transitions of each year's high school graduates, identifying factors associated with success.
- Engage policymakers and education stakeholders in the drive toward significant improvements in policy and practice among the region's educational institutions.
- Facilitate continuous improvement through workshops, seminars and related efforts in Central Texas' education systems.

Prior administrative data from grades 7-12 will be added to the research data set for both 2005 and 2006 graduates in the second year of the study, along with postsecondary and labor market participation data for 2005 graduates. The follow-up survey for 2005 graduates will also be piloted in the second year. Statistical models that incorporate all of these data sources for 2005 graduates will be developed in the second year of the project. Reports

developed in the Fall of 2006 will be the first reports to incorporate all of these data sources for the class of 2005. Annual reports in subsequent years of the project will repeat this process for each new graduating class and update the information for 2005 graduates and all following graduating classes through available administrative data sources (and limited use of surveys, if needed).

Future analyses will assess the importance of high school experiences on whether students go on to college, find employment, are on welfare or incarcerated. In addition to tracking the outcomes of the students through administrative databases, the Data Center will survey students to gather data on *why* these postsecondary choices were made, and why they were successful or not in their transition to adult life after completing high school.

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Appendix A:

Detailed Research Methods

Research Activities Planned for Future Years

In *Years 2-5* — January 2006 through December 2009 — the Data Center will conduct the following activities on an annual basis:

- Negotiate MOUs with five additional ISDs to secure their participation (Year 2).¹⁶
- Negotiate/renew data-sharing agreements with agencies to provide for access to electronic administrative databases used to track educational and workforce progress of individual students for up to four years after graduation.
- Conduct in-school surveys of high school seniors in 27 high schools from nine ISDs just prior to their high school graduation.
- Conduct follow-up surveys of prior-year graduates approximately one year after graduation.
- Expand research and analysis on students' postsecondary education experiences, focusing on enrollment, achievement, retention and completion.
- Provide longitudinal portraits on transitions of each year's high school graduates, identifying factors associated with success.
- Engage policymakers and education stakeholders in the drive toward significant improvements in policy and practice among the region's educational institutions.
- Facilitate continuous improvement through workshops, seminars and related efforts in Central Texas' education systems.
- Serve as a pilot to demonstrate a successful approach for adoption by other Texas regions and communities.
- Secure funding to sustain and support Data Center activities in Years 3-5 (Year 2).

Central Texas ISDs that may be invited to join this project after completion of the pilot phase include: Georgetown, Hays Consolidated, Leander, Eanes, Dripping Springs, Wimberley, Lago Vista, Manor, Hutto, Taylor, Liberty Hill, Florence, Coupland, Jerrell, Granger, Thrall, San Marcos Consolidated and Lake Travis. Although five additional districts are proposed for addition in 2006, the number of districts invited to participate ultimately will depend upon the availability of funds.

¹⁶ Specific Year-2 activities are designated as such.

Prior administrative data from grades 7-12 will be added to the research data set for both 2005 and 2006 graduates in the second year of the study, along with postsecondary and labor market participation data for 2005 graduates. The follow-up survey for 2005 graduates will also be added during the second year. Statistical models that incorporate all of these data sources for 2005 graduates will be developed in the second year of the project. Reports developed in the Fall of 2006 will be the first reports to incorporate all of these data sources for the class of 2005. Annual reports in subsequent years of the project will repeat this process for each new graduating class and update the information for 2005 graduates and all following graduating classes through available administrative data sources (and limited use of surveys if needed).

The Data Center will collect and track two different types of data, administrative data and survey data, linked through the use of an individual identifier. The Data Center will assess the importance of high school experiences on whether students go on to college, find employment, are on welfare or incarcerated. In addition to tracking the outcomes of the students through administrative databases, the Data Center will survey students to gather data on why these postsecondary choices were made, and why they were successful or not in their transition to adult life after completing high school.

Profiles of Pilot School Districts

Austin Independent School District

In 2002, the population of the City of Austin and capital of the State of Texas was estimated at 680,899 and the population of the Austin-San Marcos Metropolitan Statistical Area (MSA) — which includes Bastrop, Hays, Caldwell, Travis and Williamson counties — was estimated at 1,306,627. The region's diversity in race/ethnicity and socio-economic levels is reflected in its school population. In the 2004-05 school year, Austin ISD had a total student population of 79,707 students, with more than 20,000 students enrolled in the district's 12 high schools. The boundaries of the Austin school district include most of the City of Austin and much of Travis County. Of the 29 public school districts in the MSA, Austin is the largest, followed by Round Rock, Leander, Pflugerville, Hays, Georgetown, Bastrop, Del Valle, San Marcos and Eanes. Austin ISD is the third-largest employer in the MSA, behind the University of Texas and Dell.

Del Valle Independent School District

Del Valle ISD is named for an 1832 Mexican land grant and spans 174 square miles. It is an Austin suburb with no mayor, city council, or chamber of commerce. The school district is the hub for the communities of Garfield, Creedmoor, Mustang Ridge, Elroy, Pilot Knob, Webberville and Hornsby Bend. These communities, once called the Colorado Commons School Districts, were consolidated into the Del Valle ISD in 1963. The District graduated its first class in 1959. The farming and ranching tradition upon which the area was built is still a key source of income for many Del Valle families. The total school district population is 7,728 with one high school of approximately 1,824 students in the 2004-05 school year. According to the Texas Education Agency's Academic Excellence Indicator System, the high school is 63.7 percent Hispanic and 59.7 percent of its students are categorized as low-income. Del Valle has undergone dramatic growth and change with the opening of the Austin-Bergstrom International Airport in 1998 and is home to a number of high tech companies including AMD, International SEMATECH and Tokyo Electron.

Round Rock Independent School District

Round Rock is located 16 miles north of downtown Austin and has a rapidly growing population of over 80,000 individuals. Round Rock ISD is comprised of parts of Williamson and Travis Counties, Cedar Park and Austin. More than 36,000 students currently attend the district's four high schools, eight middle schools, 27 elementary schools and three alternative learning centers. During the past five years, the number of students has increased by nearly 21 percent, and the annual growth rate of approximately 3.5 percent is expected to continue. Round Rock school district has a diverse ethnic base with a student population that is 22.5 percent Hispanic, 9.7 percent African-American, 58.3 percent Caucasian and 9.5 percent other ethnic backgrounds (AEIS 2004-2005). Round Rock boasts a diverse economy which includes high tech and back-office operations, as well as light manufacturing. This community is home to the corporate headquarters of Dell Computers Inc. and two of the largest photomask companies in the world, DuPont Photomasks and Photronics.

Pflugerville Independent School District

Pflugerville is located on Farm Road 1825, fifteen miles north of Austin in northeastern Travis County. The city, settled in the 1860's by German farmers in the rolling hills and prairies, led a quiet, industrious existence throughout its first 150 years. By 2005, its population had

burgeoned to approximately 26,100 from a mere 800 residents in 1984. In the 2004-05 school year, Pflugerville ISD had a total school population of 17,550 students. The district reported the following demographics: 31.9 percent of students were Hispanic, 22.1 percent African-American, 37.5 percent Caucasian and 8.6 percent other ethnic backgrounds. 36.2 percent of the district's students qualified for free/reduced lunch status. The community considers Dell Computers Inc. and Samsung as its major employers.

Analysis of Publicly Available Data

An extensive review of the literature identified a number of factors that influence successful student transitions from high school to postsecondary education and students' subsequent success or failure while in college. Researchers then grouped variables from the literature review into several categories to determine potential sources for data from which to analyze the factors and to identify the interrelationships between them. These categories are personal academic student success, student social and demographic backgrounds, school characteristics, community characteristics, student activities in college and college characteristics. The depth and breadth of these factors and proxy variables currently preclude their inclusion in any single data source. So, information was culled from the multiple sources of administrative and survey data listed in Appendix B.

Many of these potential data sources could not be used for this analysis because:

- Data may not have included the Central Texas area or had a sample size too small to draw conclusions about this region,
- Data did not contain information from enough years to draw a statistically valid prediction,
- Research in multiple publications was often based on the same data sources.
- De-identified data files could not be linked to other sources, removing the ability to accurately track students over time,
- Data may not have been collected at the school or student level, preventing the ability to draw aggregate conclusions about schools and students.

After completing this process, the remaining data sources were used to analyze each of the primary research questions. Table 1 lists these sources and the years for which they were available. Because even these data sets have limitations, researchers grouped schools with similar characteristics (e.g., demographics, percent of low-income students) to draw additional conclusions about the school-level research questions.

Table 1. Data Sources used to Answer Research Questions

Research Question	Data Source	Years
1. Background factors associated with success	TEA: Public Education Information Management System (PEIMS); Academic Excellence Indicator System (AEIS)	1998-2005
2. Changes over past six years in key variables	TEA: PEIMS/AEIS	2004-05
3. Transition rates from high school to college	THECB: High School to College Linkages	2005 report on 2004 graduates
4. Educational attainment	U.S. Census: American Community Survey	2000-2004

The primary limitation of this approach is the absence of some key variables in the administrative data which forces researchers to use proxy variables. Additionally, measurements from the publicly available AEIS data set are at the school rather than student level. Finally, there is only a tenuous link between data related to the background factors influencing future collegiate entry and success and the data dealing with those actual transition rates. These limitations make it impossible to perform a more sophisticated statistical analysis.

Survey Development

The Data Center is unique in its implementation of a graduate survey used in coordination with administrative data to track students' postsecondary outcomes. This enables researchers to determine both the reasons behind graduates' decisions and why they perform successfully or not. Administrative data alone often prove insufficient in identifying the reasons behind students' postsecondary outcomes. Though administrative data sources contain a wealth of general information about the students in question, the survey was developed to obtain more specific information about *why* they made their decisions.

One problem with relying solely on administrative data is the holes in the databases. For example, consider the many jobs that high school students might be employed in which are not covered by Unemployment Insurance records (e.g. baby sitting, mowing lawns, and working in

family run establishments without pay). Since this information cannot be obtained from administrative data, Data Center researchers may use the survey to ask students directly about these activities.

The survey was developed with the concerns about administrative data, as well as other issues in mind. The survey fulfills two main purposes:

- To ask background questions about the students' lives in high school and additional information that is not contained in administrative databases; and
- To obtain contact information for the student for future follow-up surveys.

To determine which items to include on this high school student survey, variables that were shown to influence success in both education and the workforce were selected from three sources. These three sources were the literature review (Appendix B), prominent high school student surveys and focus groups (described later in this appendix). Data on some of these influential factors could be found in administrative databases; those that could not were included in the survey. This includes factors that are more subjective and not easily quantifiable such as students' personal expectations, parental expectations of the students, quality of the parent/student relationship, as well as readily quantifiable information including participation in extracurricular activities, the student's first language, parental educational background and whether or not the student works in addition to attending school (See Appendix B for the entire list of factors). In choosing which questions to ask and how to ask them, two surveys were extremely helpful. They were the Department of Education's High School and Beyond (HS&B) Survey and the Austin Independent School District's High School Exit Survey.

The graduate survey was comprised of three different parts, reflecting the families of factors by which students are influenced in their decision to seek higher education. The three sections are: Self and Family Background, High School Experience and Plans for After High School. The central idea of this survey is similar to the research of the Harvard Family Research Project on "complementary learning," (Harvard Family Research Project, 2005) where the different categories of items on the survey reflect factors both inside and outside of school that influence student learning and academic achievement.

Focus Groups

In addition to the high school student survey and the literature search, small focus groups were conducted early in the summer of 2005 to help refine the high school senior survey, field

test the instrument and discuss how to best implement the survey. Two focus groups of about five graduates were held for approximately three hours each to inform the survey and gather a general sense of students' plans following graduation. Facilitators sought graduates' opinions of the factors that influenced their plans to supplement the available literature on this topic. Graduates were also asked their opinions about ways to improve the survey administration, approaches for encouraging graduates to participate in these focus groups and in the surveys, and the best way to contact graduates for future follow-up surveys.

The graduates selected to participate in focus groups were obtained from the database of participants in Skillpoint Alliance's 2005 College and Career Fair. To simplify the consent process during the initial year of the survey, only graduates who were at least 18 years old and who completed consent forms prior to participation were included. Letters were sent to potential focus group participants, followed by telephone calls. Incentives for participants included food and beverages during the focus groups and a \$20 Target gift certificate.

In a group setting, facilitators asked participants questions about their high school experiences and influences on post-high school decisions using researched focus group methodology. In order to determine additional factors that strongly influenced postsecondary transitions that should be asked in the survey, open-ended questions were included and analyzed. Topics covered asked about people, events, or experiences, such as school, family, other people in their social network and experiences they had during high school outside of the classroom. Focus group participants also filled out a consent form and completed a draft of the senior survey. After taking the survey, facilitators asked them to evaluate both the focus group and survey. They also discussed plans for administering the survey, asked focus group members how they would react to it and obtained their suggestions about how to administer it more effectively. The information gleaned from the focus groups provided both stories and information about influences on students' decision-making processes that would be impossible to obtain through a survey or administrative data.

Researchers were able to take several facts from the focus groups to help improve both the content and administration of the survey:

- An individual involved in the student's life promoted the aspiration for college education. This includes the presence of a "significant adult mentor," who does not have to be family and who encouraged and helped the student to succeed.
- AVID at Reagan High School and college visits played a key role in student interest in a college education.

- All attendees had strong ideas about college and seemed determined to attend. Although positive, this indicated that it might be difficult to attract noncollege-bound students to take the survey.
- A \$5 gift certificate for food would be an adequate small incentive to encourage students to take the online survey.
- A laptop computer was an excellent large incentive to encourage student participation.
- The first focus group provided specific feedback on survey items and mechanics including
 - Redundancy with two questions;
 - Incorrectness of housewife term vs. homemaker in father occupation question;
 - A desire to have middle value questions in some of the education assessment questions; and
 - Need for an “other” category under the influential people question.

Survey Administration

This year (2005), the first year of this project, the high school senior survey was conducted during the summer primarily via the Internet. In future years, the survey will be administered at school in April or May of students’ senior years.

Students were informed about the survey either by a post card sent to their home addresses or by a phone call made to them by researchers at the Ray Marshall Center. Only students who graduated in 2005, who were 18 years old or older and had released their directory information to their local school districts were eligible for the survey. To identify recent graduates in each high school in the pilot school districts, researchers from the Data Center obtained student contact (directory) information through Memorandum of Understandings established with four Central Texas school districts — the Austin, Del Valle, Pflugerville and Round Rock Independent School Districts. This directory included names, mailing addresses, telephone numbers and the school attended for members of the 2005 graduating class.

All graduates on the lists provided by the local school districts (approximately 5,004 subjects) received postcards containing information about the survey and the larger study, and gave them the option of taking the survey over the Internet through a secure connection or by mail. Most took it online. The postcard contained the Internet address of the survey, as well as a website for additional information about the survey in the form of Frequently Asked Questions (FAQs). Students who chose to take the survey by mail needed to call the telephone number

listed on the postcard to request a copy of the survey. Prior to taking the survey, graduates provided their consent for further tracking of their information through administrative databases.

The 2005 survey was administered in three waves as directory information became available from the school districts. Wave 1 began on July 15 with the May graduates of the Austin and Del Valle Independent School Districts who were over 18 years old and whose parents approved release of their directory information. Wave 2 targeted May graduates from the Pflugerville Independent School District and graduates with summer birthdays. The final wave, which began on August 17, included May graduates from the Round Rock Independent School District and summer school graduates from all four school districts whose parents had approved the release of their directory information.

Postcard Response

Despite a reduced number of graduates to target, Data Center researchers did not expect a very high response rate using this interim approach, and so decided to provide incentives to increase the response rate. The postcard contained basic information about these incentives. Researchers anticipate only offering these incentives for the 2005 cohort, because it will be easier to get a high response rate for future cohorts if they take the survey during school hours. All participants who submitted a completed survey and consent form were sent a small incentive in the form of a \$5 gift certificate to Mr. Gatti's Pizza. Their names were also entered in a drawing for a larger incentive, one of three computers. The first drawing occurred on August 12, 2005, the second on August 23, and the final drawing took place on August 29. The earlier that graduates completed the survey, the better chance they had of winning.

Of the 4661 postcards sent to graduates across the Central Texas area, 213 were returned due to bad addresses, representing four percent of all postcards sent. Of homes that received the postcard, 134 graduates, or three percent, took the survey online. Westwood High School in Round Rock ISD produced the highest number of responses due to the mailing, at 21, while Johnston and Reagan High Schools in Austin ISD produced zero responses from the mailing alone.

Phone Call Response

Researchers also used follow-up telephone calls to boost survey response rates. All non-respondents from Austin, Del Valle and Pflugerville Independent School District received calls

and graduates from Rock Round Independent School District received calls as time permitted. Additional follow-up calls were made to schools with particularly low response rates. Statistics from return of postcards and follow-up efforts were used to document the accuracy of directory information and the mobility of recent graduates. Phone numbers that were incorrect, disconnected, or not provided by the school district accounted for a large proportion of the non-respondents, but varied greatly by school district, from a high of 40 percent for the Pflugerville school district to a low of 27 percent for Austin Independent school district. Wide variation also existed within school districts.

In Austin ISD schools with a high percentage of low-income students, directory information including bad phone numbers ranged from 30 percent to nearly 50 percent of 2005 graduates. In the other two school districts for which data is available (Del Valle and Pflugerville) records containing bad student phone numbers were consistently higher than 30 percent across all schools regardless of income. Over a quarter of high school students could not be contacted directly by phone less than three months following graduation, indicating the need for continuously updated and accurate student contact information if these students are to be tracked. After attempts to contact by phone, 101 additional graduates took the survey online, increasing the number of responses by roughly 75 percent, to a total of 235.

Limitations

The experience of attempting to contact high school graduates outside of the high school setting to encourage them to take the online survey demonstrated that this method was ineffective. This method was ineffective for two reasons: the directories contained insufficient information, and the way in which researchers were forced to administer the survey led to a low response rate. Directory limitations included:

- School district directory information provided inaccurate and incomplete information on students, preventing direct contact with more than a quarter of the graduates whose information was provided.
- Parents who opt out of having their student's directory information released reduced the number of graduates available to survey.
- Students below the age of 18 as of July 31st, 2005 were not included in the survey, which accounted for more than 10 percent of all graduates at each district for which this information is available.

Administrative limitations included:

- Provided that the directory information was accurate, the unadjusted response rate for all graduates for which the Ray Marshall Center had directory information was

around five percent. The resources that went into achieving this number, (including sending postcards, calling thousands of students over a few weeks, going to summer school graduation to distribute flyers to encourage students to take the survey and managing small and large incentives for students who took the survey) represent a much higher than expected cost, both in working hours and fiscal resources.

- Even when researchers contacted graduates, speaking with them directly by phone to encourage them to take the survey online, the response rate was less than ten percent.
- This low response rate led to insufficient numbers and percents of certain population groups, which made adequate analysis of the data impossible.

Prior to the administration of the survey, and during the Internal Review Board process, researchers were curious as to the number of high school graduates at each district who could not be included in the survey due to their age. Information provided by three of the school districts after implementation of the survey indicated that these numbers were not insignificant, further emphasizing the importance of having students take the survey within the school day.

- In Round Rock ISD, 231 graduates from the four surveyed high schools, or more than 11 percent of the graduating class, were under the age of 18 at the time of the survey.
- In Del Valle ISD, 64 graduates, or more than 18 percent, were under the age of 18 as of July 31st, 2005.
- In Austin ISD, 385 graduates were under 18 at the time of the survey, or just over 10 percent of all graduates.

Other than their birthdays as a method of differentiation, this set of younger graduates included those who completed high school in less than four years, while the set of older graduates targeted using directory information included those who had repeated at least one grade.

Given these two types of limitations, working with school districts and schools to allow future cohorts of high school graduates to complete the survey within the school day should significantly improve the administrative process, increase the response rate of high school graduates and provide a better representative sample with enough respondents to perform adequate statistical analysis.

Statistical Methods Used to Analyze Survey Responses

To better understand the influences on students making transitions after high school, the survey results have been split up into different groups. These groups include college enrollment status, race, gender, low-income status, mother's education level (associate's degree or higher), school district attended and low-income status of the school attended (with greater than 40

percent considered a high percentage of low income students). These different populations have been found in the literature to have different transition rates to college and often to have distinct issues in making a successful transition to life after high school. In addition, belonging to some of these demographic groups has been found to influence postsecondary transitions. Breaking the entire population into groups for analysis will help obtain separate results for many of the explanatory variables. It will also make it easier to determine the most influential variables for success, as well as facilitating the reporting of findings back to the school districts on their successes, current gaps they have in their programs, the populations to which they need to target certain programs and services better, and strategies for addressing shortfalls. These strategies include developing different programs to target the needs of currently underserved populations and encouraging the families of these groups to become more involved in their children's education.

To determine which factors influence successful transitions for different populations within each group, researchers tested whether or not there is a high variance in how students answered each item within each group. For each question, researchers determined what percentage of each population chose each answer. Then, they calculated the difference between the percentage of the population which chose each answer the most (the highest percentage) and the percentage of the population which chose that answer the least (the lowest percentage). For example, in analyzing race, assume that 100 percent of Asians expected to go to college throughout high school and they were the population who chose this answer to this question the most. Also assume that African-Americans were the population that chose this answer the least, and that only 80 percent responded that they expected to go to college throughout high school. The difference would be 20 percent. To find the average difference, researchers summed up the answers to all the questions and divided by the number of answers. After finding the average difference, the analysis focused on those questions whose answers revealed a difference that was greater than one standard deviation away from the average.

The analysis of the survey data starts with a broad overview of the total population who answered the survey. The next section reviews the large differences between those who went to college and those who did not. The third section investigates how schools helped prepare students differently for life after college. The final section investigates whether there were huge differences in those factors that are influential on the decision to go to college or not among the rest of the subpopulations.

2005 High School Graduate Survey (July 22 - August 30, 2005)

Postcard Stats

Phone Call Statistics

Summary Information

School	Total directory information received	Postcard Stats			Phone Call Statistics					Summary Information				Total number of high school graduates	
		Bad addresses	Net number mailed	Total responses due to mailing	Bad phone numbers/ no phone numbers provided/moved	% of bad phone numbers by school	Spoke to the student by phone	Left message/no answer over at least 2 phone calls*	Total additional responses after calls	Total number of responses	Response rate from mail responses	Overall response rate from mail and phone	% of respondents to the survey for whom there was mail and phone contact	Total number of high school graduates	Response rate (as share of total graduates)
Austin ISD¹															
Austin	362	16	346	8	70	19.3%	99	193	10	18	2.3	5.2%	6.5%	478	3.8
Johnston	98	11	87	0	43	43.9%	36	19	2	2	n/a.	2.3%	4.5%	136	1.5
McCallum	192	7	185	6	36	18.8%	58	98	3	9	3.2	4.9%	6.0%	316	2.8
Lanier	196	22	174	2	73	37.2%	62	61	4	6	1.1	3.4%	5.9%	255	2.4
Reagan	97	7	90	0	48	49.5%	30	19	3	3	n/a.	3.3%	7.1%	137	2.2
Travis	188	20	168	3	83	44.1%	53	52	7	10	1.8	6.0%	11.8%	246	4.1
Crockett	170	8	162	10	44	25.9%	60	66	3	13	6.2	8.0%	11.0%	348	3.7
Anderson	293	14	279	14	47	16.0%	99	147	4	18	5.0	6.5%	7.8%	418	4.3
LBJ	190	14	176	8	42	22.1%	42	106	6	14	4.5	8.0%	10.4%	328	4.3
Bowie	348	6	342	4	70	20.1%	66	212	10	14	1.2	4.1%	5.1%	528	2.7
Garza Independence	107	6	101	5	42	39.3%	35	30	4	9	5.0	8.9%	15.3%	159	5.7
Akins	197	11	186	8	61	31.0%	75	61	3	11	4.3	5.9%	8.8%	387	2.8
Total	2438	142	2296	68	659	27.0%	715	1064	59	127	3.0	5.5%	7.8%	3736	3.4
Del Valle ISD²															
Del Valle High School	295	9	286	5	95	32.2%	74	126	11	16	1.7	5.6%	8.4%	359	4.5
Total	295	9	286	5	95	32.2%	74	126	11	16	1.7	5.6%	8.4%	359	4.5
Pflugerville ISD³															
Pflugerville HS	415	9	406	9	137	33.0%	67	211	7	16	2.2	3.9%	5.9%	n/a	n/a
Connally HS	315	15	300	10	155	49.2%	48	112	10	20	3.3	6.7%	13.8%	n/a	n/a
Total	730	24	706	19	292	40.0%	115	323	17	36	2.7	5.1%	8.7%	n/a	n/a
Round Rock ISD⁴															
McNeil High School	377	14	363	6	72	n/a	52	151	9	15	1.7	4.1%	n/a	523	2.9
Round Rock High School	277	4	273	5	20	n/a	19	53	5	10	1.8	3.7%	n/a	342	2.9
Stony Point High School ⁵	297	8	289	10	n/a	n/a	1			10	3.5	3.5%	n/a	509	2.0
Westwood High School ⁵	460	12	448	21	n/a	n/a				21	4.7	4.7%	n/a.	607	3.5
Total	1411	38	1373	42	92	n/a	72	204	14	56	3.1	4.1%	n/a	1981	2.8
Total for All Districts	4874	213	4661	134	1046	30.2%	904	1513	101	235	2.9	5.0%	8.0%		

1 Sent out July 22 and Aug. 11, 2005.

2 Sent out July 22, 2005.

3 Sent out Aug. 11, 2005.

4 Sent out Aug. 17, 2005.

5 No follow-up telephone calls made for these schools.

6 Round Rock figures not used in calculations.

Appendix B: Background Factors Analysis

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Personal academic background						
Average grades of C's or lower from 6th to 8th grade	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Held back one or more grades from 1st to 8th grade	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
A good high school GPA	+	DeBerard, M. Scott, Glen I. Speilmans and Deana Julka. <i>Predictors of Academic Achievement and Retention among College Freshman: a Longitudinal Study.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Taken courses completing the Recommended, Distinguish, Minimum Graduation Plan	+	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Number of AP classes	+	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
AP test score	+	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Number of math classes	+	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment.</i> Venezia, Andrea, Michael W. Krist, and Anthony L. Antonio. <i>Betraying the College Dream: How Disconnected K-12 and postsecondary Education Systems Undermine Student Aspirations.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)

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Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
TAKS test scores.	+	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment.</i>	None			
SAT/ACT scores	+	Horn, Laura J. and Lawrence K. Kojaku. <i>High School Academic Curriculum and the Persistence Path Through College.</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Technologically proficient	+	Snyder, Thomas, Alexandra Tan and Charlotte Hoffman. <i>Digest of Education Statistics 2003.</i>	Use of computer at home and interest in taking courses	PEIMS Current Population Survey	State, county, school district and school National, state and MSA	1991-present (delay for collection and processing) None (data available from 1993 to present)
Social background						
Number of friends in college	+	Nora, Amaury. <i>The Role of Habits and Cultural Capital in Choosing a College, Transitioning from High School to Higher Education and Persisting in College Among Minority and Non-Minority Students.</i>	None			
Participated in extra curricular activities. Especially sports or music.	+	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	None			
Belonged to a church youth group	+	Karweit, Nancy and Steve Hansel. "School Organization and Friendship Selection," in <i>Friends in School</i> , eds. Joyce Epstein and Nancy Karweit	None			
High Personal plans and expectations, by grade level.	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	None			
Employed while in school	-	Marsh, Herbert and Sabina Kleitman, <i>Consequences of employment during high school: Character building, subversion of academic goals, or a threshold?</i> Stern, David. <i>Learning and Earning: The Value of Working for Urban Students</i>	Employment (age 16-19) Unemployment (age 16-19) Employment (age 15-20)	Kids Count Kids Count Ready by 21: Youth Advisory	County and city State Travis County	2000 2000-2003 2005

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
			Student Work Hours	Group, Survey of Youth Attitudes TGSLC – State of Student Aid and Higher Education	State	
Changing schools two or more times from 1st to 8th grade	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	Mobility rates (high school)	AEIS	Data available by school but not by graduating class	1998, 2000, 2001 and 2002
Being in a single-parent household (in 8th grade)	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	Children (under age 18) in single-parent households Single-mother households	Kids Count American Community Survey	State City and county	2000-2003 1999-2003
One or more older siblings who left high school without completing	-	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>		PEIMS	State, county, school district and school	91-present (delay for collection and processing)
Parent postsecondary experience (mom's is more important than dad's)	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	Head of household is high school drop-out Births to mothers with <12 years of education	Kids Count Kids Count	State State and city	2000-2003 1990-2000
High Parental expectations.	+	Horn, Laura J. et al. <i>Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out</i>	None			

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Above average family income level	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	Median family income Families (with child) income Under age 18 below poverty (includes data specific to age 16-17) Children in low-income families Children (age 5-17) in families in poverty Economic characteristics	Kids Count Kids Count Kids Count Kids Count US Census NSAF-Urban Institute	County and city State County and city State State, county and school district National and state	1993, 1995, 1997-1999 2000-2003 1993, 1995, 1997-1999 2000-2003 1995-2002
Race, if not white	-	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	Race/ethnicity Race/ethnicity (< age 18) Race/ethnicity (< age 18) Race (age 15-20) Race/ethnicity	PEIMS AEIS Kids Count US Census Ready by 21: Youth Advisory Group, Survey of Youth Attitudes NSAF-Urban Institute	State, county, school district and school Data available by school but not by graduating class County and city National, state, county and city Travis county National and state	1991-present (delay for collection and processing) 1998, 2000, 2001 and 2002 1990-2001 2000 2005 1997, 1999, 2002

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Gender, if not male	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	None			
If attend a religious institution.	+	Kleese, E. and J. D'Onofrio, <i>Student Organization and Friendship Selection</i>	None			
Parent's occupation.	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	None			
Number of siblings (worse off with more)	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	None			
Relationship with parent, if good	+	Horn, Laura J. et al. <i>Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out.</i>	None			
Language other than English spoken at home	-	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	<p>Children who speak language other than English at home</p> <p>Children who have difficulty speaking English</p> <p>Limited English proficiency</p> <p>Language other than English spoken at home</p>	<p>PEIMS</p> <p>Kids Count</p> <p>Kids Count</p> <p>AEIS</p> <p>US Census</p>	<p>State, county, school district and school</p> <p>State</p> <p>County and city</p> <p>Data available by school but not by graduating class</p> <p>State</p>	<p>1991-present (delay for collection and processing)</p> <p>2000-2003</p> <p>2000</p> <p>1998, 2000, 2001 and 2002</p> <p>2000</p>

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Ever received public assistance.	-	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	<p>Children receiving TANF/Medicaid/CHIP/WIC</p> <p>Children receiving SSI/Food Stamps</p> <p>School lunch program participation</p> <p>School lunch program participation</p>	<p>Kids Count</p> <p>Kids Count</p> <p>SIPP</p> <p>Losing Our Future</p>	<p>County</p> <p>State and county</p> <p>National and MSA</p> <p>State and school district</p>	<p>TANF - 1993-2002; Medicaid - 1995-2002; CHIP - 2000-2002; WIC - 1996-2002</p> <p>SSI - 1997-2001; Food Stamps - 1995-2003</p> <p>1992-1993, 1996, 2001</p> <p>2003</p>
Confusion over financial aid.	-	Horn, Laura J. et al. <i>Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out</i>	None			
What types of financial aid applied for/awarded.	??	Knapp, Laura G. et al., <i>Enrollment in Postsecondary Institutions, Fall 2002 and Financial Statistics</i>	<p>Student Status Confirmation Reports for guaranty agencies and NSLDS and enrollment verification</p> <p>Perkins and private loan deferments and processing requests from scholarship grants and other aid programs</p> <p>Loan volume outlines by program type</p> <p>Educational Assistance by grant/scholarship type</p>	<p>National Student Clearing House (Federal Family Education Loan Program and Federal Direct Student Loan Program)</p> <p>National Student Clearing House (Optional Enrollment Verification)</p> <p>Legislative Fact Sheets</p> <p>SIPP</p>	<p>Individual records available</p> <p>Individual records available</p> <p>Texas House, Texas Senate and Texas Congressional Districts</p> <p>MSA</p>	<p>None (yearly data available)</p> <p>None (yearly data available)</p> <p>None (yearly data available)</p> <p>1992, 1993, 1996, 2001</p>

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
			Reliance on loans	Measuring Up	National and state	2000, 2002, 2004
Parental involvement with Childs education	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	None			
School variables						
Teacher quality" percent with credentials.	+	Hanushek, Eric A., John F. Kain and Steven G. Rivkin, <i>Teachers, Schools and Academic Achievement</i>	None	PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Years of experience.	+	Hanushek, Eric A., John F. Kain and Steven G. Rivkin, <i>Teachers, Schools and Academic Achievement</i>	None	PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Technology in the school	+	Snyder, Thomas, Alexandra Tan and Charlotte Hoffman. <i>Digest of Education Statistics 2003</i> . Texas Center for Education Research. <i>Technology Integration in Education (TIE) Initiative Statewide Survey Report</i> .	None			
Teacher to student ratio	+	Hanushek, Eric A., John F. Kain and Steven G. Rivkin, <i>Teachers, Schools and Academic Achievement</i>	None	PEIMS	State, county, school district and school	1991-present (delay for collection and processing)
Racial and economic stats on school, if not white or upper middle class	-	U.S. Department of Education, National Center for Education Statistics, <i>The Condition of Education 2005</i>	Economically disadvantaged students Race/ethnicity	AEIS AEIS	Data available by school but not by graduating class Data available by school but not by graduating class	1998, 2000, 2001 and 2002 1998, 2000, 2001 and 2002
Number of (college) counselors to students.	+	Venezia, Andrea, Michael W. Krist and Anthony L. Antonio, <i>Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations</i>		PEIMS	State, county, school district and school	1991-present (delay for collection and processing)

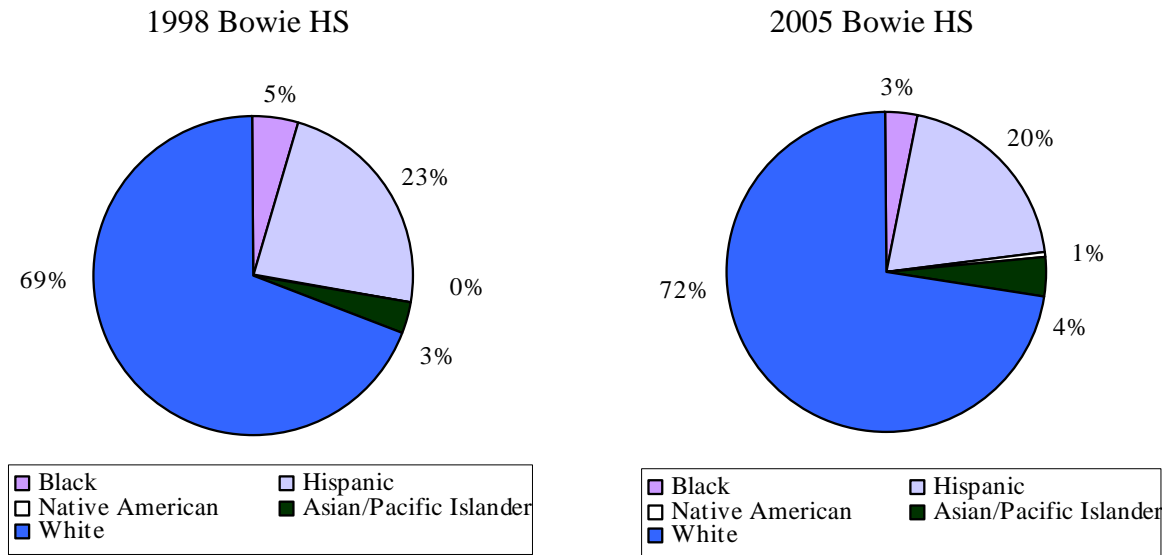
Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Mental health counseling available	+	Gysbers, Norman C. <i>Comprehensive guidance and counseling programs: The evolution of accountability</i>	None			
Community variables						
Average income of zip code	+	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	Children who live in neighborhoods where >20% are below poverty Economic characteristics	Kids Count NSAF-Urban Institute	County and city National and state	2000 1997, 1999, 2002
School funding. Per student funds	+	Pan, Diane, Zena H. Rudo, Cynthia L. Schneider and Lotte Smith-Hansen. <i>Examination of Resource Allocation in Education: Connecting Spending to Student Performance</i>	Federal/state/local sources of funding for secondary schools and expenditures	PEIMS US Census (Annual Survey of Local Government Finances)	State, county, school district and school State, county and school district	1991-present (delay for collection and processing) 1995-2002
Racial and economic stats on community.	-	Choy, Susan P. <i>Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence and Attainment</i>	Children who live in neighborhoods where >20% are below poverty Economic characteristics	Kids Count NSAF-Urban Institute	County and city National and state	2000 1997, 1999, 2002
State classification: districts as low-performing to high-performing	-	Adelman, Clifford. <i>Answers in the Toolbox: Academic Intensity, Attendance Patterns and Bachelor's Degree Attainment</i>	None			
Activities in college						
Smoking, drinking often in college	-	DeBerard, M. Scott, Glen I. Speilmans and Deana Julka, <i>Predictors of Academic Achievement and Retention among College Freshman: a Longitudinal Study</i>	Alcohol/cigarette/drug use by age Drug use	Kids Count Ready by 21: Youth Advisory Group, Survey of Youth Attitudes	State Travis County	2002 2005

Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
Enrolled full time instead of part time	+	Horn, Laura J. and C. Dennis Carroll. <i>Confronting the Odds: Students at Risk and the Pipeline to Higher Education</i>	College enrollment by full- and part-time status Enrollment status of prospective, current and former students	Current Population Survey National Student Clearing House (Student Tracker: Colleges/Universities, High School and Outreach Programs)	National Individual records available	1970-2003
Live at home	-	Nora, Amaury. <i>The Role of Habits and Cultural Capital in Choosing a College, Transitioning from High School to Higher Education and Persisting in College Among Minority and Non-Minority Students</i>	None			
Participated in activities that encourage social inclusion	+	Terenzini, Patrick T., Alberto F. Cabrera and Elena M. Bernal, <i>Swimming Against the Tide: The Poor in American Higher Education</i>	None			
College variables						
College bridge programs	+	Horn, Laura J. and Xianglei Chen, <i>Towards Resiliency: At-Risk Students Who Make it to College</i>	None			
Cost of college	+	Horn, Laura J. et al. <i>Getting Ready to Pay for College: What Students and Their Parents Know About the Cost of College Tuition and What They Are Doing to Find Out.</i>	College costs	Financial Aid – School Fact Sheets	Data available for Texas Four-Year Public, Private and Medical Schools	
Presence of a college recruitment program	+	Nora, Amaury. <i>The Role of Habits and Cultural Capital in Choosing a College, Transitioning from High School to Higher Education and Persisting in College Among Minority and Non-Minority Students</i>	None			
Financial aid programs and assistance	+	Knapp, Laura G. et al., <i>Enrollment in Postsecondary Institutions, Fall 2002 and</i>	Grants/scholarships/financial aid programs	SIPP	MSA	1992, 1993, 1996, 2001

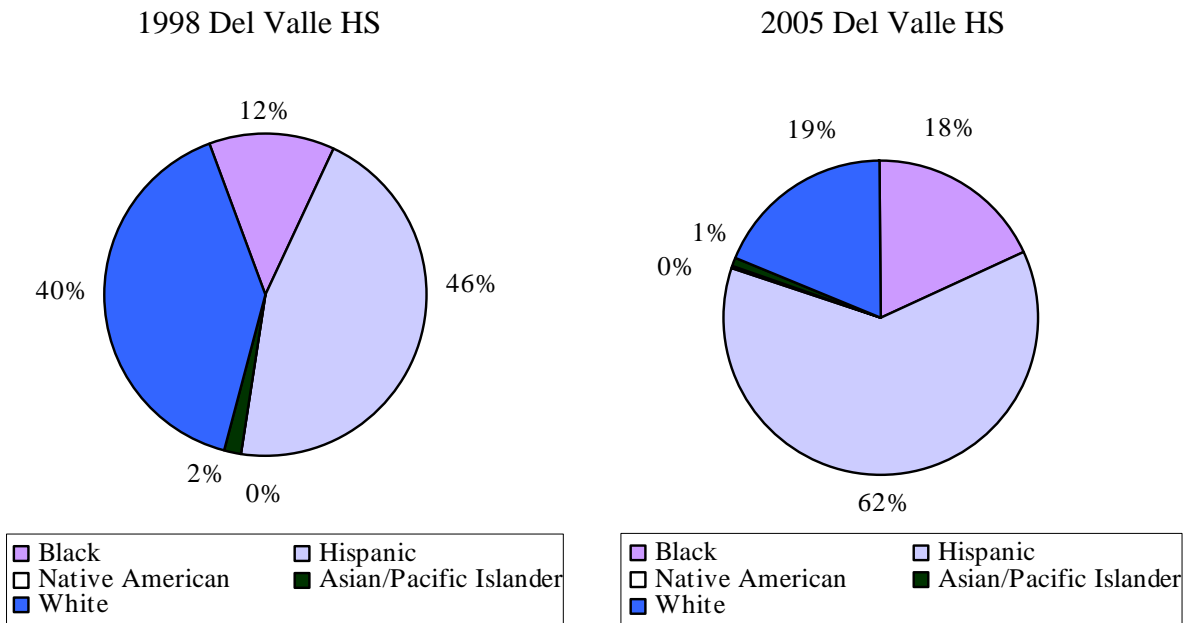
Factors that lead to or hinder a successful postsecondary transitions	Expected effect on likelihood of college attendance	Reference	Variables Available	Source	Limitation - Geographic	Limitation - Time
		<i>Financial Statistics</i>				
Does the college help facilitate many social non academic programs	+	DeBerard, M. Scott, Glen I. Speilmans and Deana Julka, <i>Predictors of Academic Achievement and Retention among College Freshman: a Longitudinal Study</i>	None			
Size of college	-	Nora, Amaury. <i>The Role of Habits and Cultural Capital in Choosing a College, Transitioning from High School to Higher Education and Persisting in College Among Minority and Non-Minority Students</i>	None			

Appendix C: School Demographic Changes 1998 – 2005

Bowie HS Demographic Changes from 1998-2005

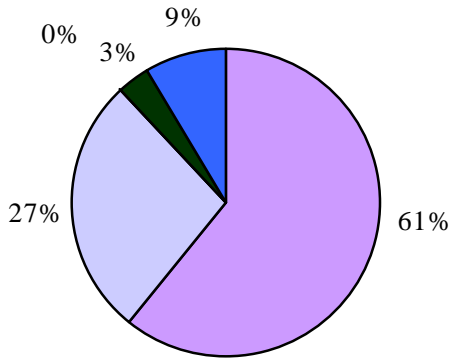


Del Valle HS Demographic Changes from 1998-2005

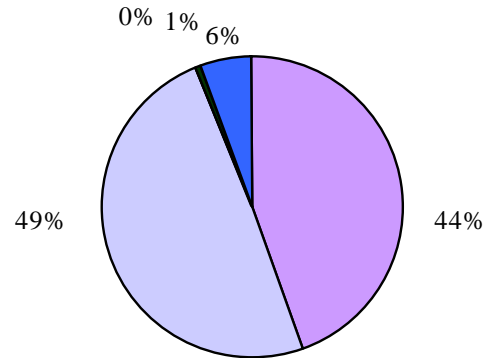


Reagan HS Demographic Changes from 1998-2005

1998 Reagan HS

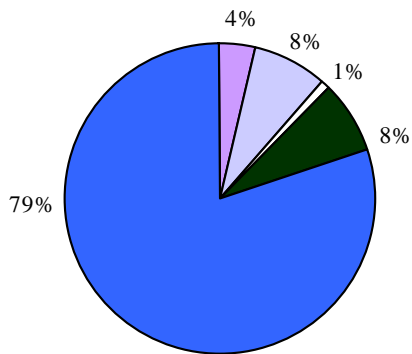


2005 Reagan HS

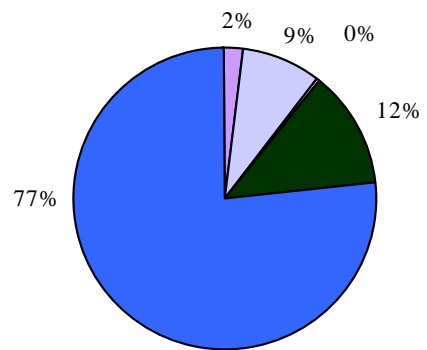


Westwood HS Demographic Changes from 1998-2005

1998 Westwood HS



2005 Westwood HS



Appendix D:

Survey Instrument

Central Texas High School Graduate Data Center

Funded by the Greater Austin Chamber of Commerce and Texas Education Agency

Project Overview:

The Central Texas High School Graduate Data Center (HSGDC) is a research project designed to track the progress of Central Texas high school graduates as they move on to colleges and careers. Its purposes are:

1. To provide regional community and business leaders, independent school districts, colleges, universities, state agencies, and employers with a comprehensive, longitudinal view of what high school graduates are doing when they leave high school and most importantly -- *why*.
2. To offer workshops and seminars on results from this research to assist local school districts in better preparing students for the demands of adulthood and for success in college and the workplace.

Your Role in This Project:

As a recent high school graduate, you can help us with this study by:

1. Completing a survey that asks about your preparation and plans for future schooling and employment, as well as family background information and student demographic information (including your local school district student identification number and any participation in free or reduced-price meal program.)
2. Giving your permission for Ray Marshall Center researchers at The University of Texas to obtain your prior secondary school records (7th-12th grades) including but not limited to grades, test scores, student surveys, and any or all codes used to identify you throughout school, including your social security number or PEIMS identification number. We are also asking you to authorize us to access your future postsecondary education and workforce records from administrative databases maintained by colleges, the Texas Higher Education Coordinating Board, the Texas Workforce Commission, and other public agencies. Our researchers will follow outcomes of all recent graduates for four years following graduation through use of existing databases maintained by those organizations and a follow-up telephone survey with you one year after graduation.
3. Giving us contact information where you can be reached in the coming year and completing another survey approximately one year from now.

For more detailed information about this study, please read the [Frequently Asked Questions](#) page on-line at www.utexas.edu/research/cshr/survey/faq.php or call (512) 471-2191 if you have specific questions.

Consent Form:

You have been informed about this study's purpose and given the opportunity to read about its procedures, possible benefits and risks, and methods used to protect the confidentiality of information that you provide. You have been given the opportunity to ask questions before signing this consent form. By signing this form, you voluntarily agree to participate in this study. Please note that by accepting the terms stated here, you are not waiving any of your legal rights.

Please provide your signature below if you have read and understood this page and agree with the following statements:

1. The information that I have provided on this survey is true to the best of my knowledge.
2. I authorize Ray Marshall Center researchers to obtain my prior secondary school records described above.
3. I authorize Ray Marshall Center researchers to obtain my future postsecondary school records for the next five years and other records available from databases maintained by public agencies.

First and Last Names of Recent High School Graduate
(please print)

*Student District ID Number

*Social Security Number

*PEIMS Identification Number

Signature: _____

Date: _____

* You must provide at least one of these pieces of information

HSGDC Student Survey

CONTACT INFORMATION

We would like to know how you are doing after high school graduation. Please provide the following information so we can contact you next year. (Your contact information is strictly confidential. We will not provide this information to anyone outside of this survey.)

Please provide the name of a contact person, the mailing address of the contact person and two phone numbers where you can be reached next year.

Contact person's full name: _____

Contact person's mailing address: _____

First Phone Number: () ____-____ Second Phone Number: () ____-____

Please provide an e-mail address we can use to contact you in the future.

My e-mail address: _____

Please provide your name, birth date and Social Security number.

Last Name

First Name

Birth Date

Social Security Number

Please provide the name of the school from which you graduated and student ID number, if applicable and you remember

Name of high school from which you graduated

Graduation Date

May 2005

August 2005

Student ID #

Please list the name and location of schools you attended from 7th to 12th grade. If, for each grade, you attended any schools outside the state of Texas, please list the state (or country, if not in the United States) of their locations for up to two such schools.

Number	Names of school	State and/or country
7 th Grade: _____	_____	_____
	_____	_____
	_____	_____
8 th Grade: _____	_____	_____
	_____	_____
	_____	_____
9 th Grade: _____	_____	_____
	_____	_____
	_____	_____
10 th Grade: _____	_____	_____
	_____	_____
	_____	_____
11 th Grade: _____	_____	_____
	_____	_____
	_____	_____
12 th Grade: _____	_____	_____
	_____	_____
	_____	_____

SELF AND FAMILY BACKGROUND

1. What is your gender?

- Female
- Male

2. What is your race/ethnicity?

- African American
- Hispanic, Latino, of Spanish Origin
- American Indian, Eskimo, or Aleut
- Asian or Pacific Islander
- White or Caucasian
- Other (please specify): _____

3. Were your parents born in the United States?

Father:

- Yes
- No (please specify which country):

Mother:

- Yes
- No (please specify which country):

4. Were you born in the United States?

- Yes No (please specify which country): _____

5. How many siblings do you have?

- 0 1 2 3 4 or more

6. Have any of your older siblings graduated from high school?

- Yes No I am the oldest child

7. Have any of your older siblings attended or are currently enrolled in college?

- Yes No

8. Have any of your older siblings graduated from college?

- Yes No

9. Who lives in your current household? (Check all that apply.)

- ____ Mother/step-mother
- ____ Father/step-father
- ____ Grandparent(s)
- ____ Aunt
- ____ Uncle
- ____ Sibling(s)
- ____ Other (please specify): _____

10. What is the highest education level completed by your mother?

- Not a high school graduate
- High school graduate
- Less than 2 years vocational/technical degree)
- 2 or more years vocational/technical
- Less than 2 years college
- Associate's degree
- Bachelor's degree
- Master's or Professional degree (e.g., law or medical degree)
- Doctoral degree (e.g. Ph.D., Ed.D.)
- Don't know

11. Which of the categories below best describes the type of job your mother (stepmother or female guardian) had for most of the time you were in high school?

- Did not work in a paid job
- CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent
- CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter
- FARMER, FARM MANAGER
- LABORER such as construction worker, car washer, sanitary worker, farm laborer
- MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official

- MILITARY such as career officer, enlisted man or woman in the Armed Forces
- OPERATIVE such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver
- PROFESSIONAL such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, clergyman, dentist, physician, lawyer, scientist, college teacher, but not including school teacher
- PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner
- PROTECTIVE SERVICE such as detective, police officer or guard, sheriff, fire fighter
- SALES such as salesperson, advertising or insurance agent, real estate broker
- SCHOOL TEACHER such as elementary or secondary
- SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter
- TECHNICAL such as draftsman, medical or dental technician, computer programmer
- Don't know

12. What is the highest education level completed by your father?

- Not a high school graduate
- High school graduate
- Less than 2 years vocational/technical
- 2 or more years vocational/technical
- Less than 2 years college
- Associate's degree
- Bachelor's degree
- Master's or Professional degree (e.g., law or medical degree)
- Doctoral degree (e.g. Ph.D., Ed.D.)
- Don't know

13. Which of the categories below best describes the type of job your father (stepfather or male guardian) had for most of the time you were in high school?

- Did not work in a paid job
- CLERICAL such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent
- CRAFTSMAN such as baker, automobile mechanic, machinist, painter, plumber, telephone installer, carpenter
- FARMER, FARM MANAGER
- LABORER such as construction worker, car washer, sanitary worker, farm laborer
- MANAGER, ADMINISTRATOR such as sales manager, office manager, school administrator, buyer, restaurant manager, government official
- MILITARY such as career officer, enlisted man or woman of the Armed Forces
- OPERATIVE such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver
- PROFESSIONAL such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, clergyman, dentist, physician, lawyer, scientist, college teacher, but not including school teacher
- PROPRIETOR OR OWNER such as owner of a small business, contractor, restaurant owner
- PROTECTIVE SERVICE such as detective, police officer or guard, sheriff, fire fighter
- SALES such as salesperson, advertising or insurance agent, real estate broker
- SCHOOL TEACHER such as elementary or secondary
- SERVICE such as barber, beautician, practical nurse, private household worker, janitor, waiter
- TECHNICAL such as draftsman, medical or dental technician, computer programmer
- Don't know

14. What was the approximate yearly average income of your family during high school?

- \$25,000 or less
- \$25,000 to \$50,000
- \$50,000 to \$90,000
- \$90,000 to \$160,000
- \$160,000 or greater

15. Check the box that best describes your relationship with your parents.

- Very good Good So-so Bad Very bad

16. Check the box that best describes how involved your parents are/were in your education.

- Very active Active Not very active Not at all active

17. To what extent did your parents encourage you to pursue further education or training after high school?

- A great deal Somewhat Not very much Not at all

18. To what extent did other family members besides your parents encourage you to pursue further education or training after high school?

- A great deal Somewhat Not very much Not at all

19. Thinking back, at what time in your life did you start thinking about college as a possibility after high school?

- As long as I can remember
 When I was a child
 In middle/junior high school
 In high school
 I've never thought about college as an option after high school

20. Throughout high school, did you expect to go to college?

- Mostly yes Not sure
 Mostly no Hadn't thought about it

21. In regard to decisions that you make about your life, please rank each of the following in terms of importance, with 1 being the **most** important and 9 being the **least** (if you would like to use the additional "Other" field, rate from 1 to 10).

- | | |
|--|--|
| _____ What my parents/grandparents think | _____ What other adults (besides family) think |
| _____ What my siblings think | _____ What my teachers suggest |
| _____ What my friends think | _____ Experiences I've had in life |
| _____ Data/information I collect | _____ My religion's teachings |
| _____ My own beliefs and ideas | _____ Other (please specify): |
| _____ | |

22. Do you regularly attend a religious institution or youth group?

- Yes No

23. Are you eligible to vote?

If not, skip to Question 26.

- Yes No

24. Have you registered to vote?

If not, skip to Question 26.

- Yes No

25. Have you voted in any school board, city, county, state, or national election?

- Yes No

HIGH SCHOOL EXPERIENCE

26. Did you participate in any extra-curricular activities (not school courses, but affiliated with your school) while in high school? (If yes, check all that apply.)

- No Yes

- Music (Chorus, Band, Orchestra, etc.)
 Theater/Drama
 Dance
 Sports
 UIL Academic Competitions (e.g., Number Sense, Spelling, Prose, Poetry, One Act Play, etc.)
 Journalism (Newspaper, Yearbook, etc.)
 Speech/Debate
 Language Clubs
 Political Clubs
 Academic Clubs (e.g., Science Olympiad, math team, Quiz Bowl, Youth in Government)
 Service Clubs (National Honor Society, PALS, Key Club, etc.)
 Other (please specify): _____

27. Did you participate in any of the following activities **outside** of school during your senior year? (If yes, check all that apply.)

No Yes

- Organized sports activities (not related to school)
- Arts/Music/Performance activities (not related to school)
- Community service activities, including volunteering (e.g., hospitals, nursing homes, museums, libraries, food drives)
- Environmental projects/activities (e.g., recycling, clean-up campaigns, tree planting)
- Faith-based or charitable organizations
- Other organizations (e.g., Boy/Girl Scouts, Red Cross, Special Olympics)
- Helping my family by providing routine care for family members
- Work

28. On average, during your senior year, approximately how many hours per week did you spend studying, doing research, or completing homework assignments **outside** of class?

- None. I never worked on schoolwork outside of class.
- 1-5 hours per week
- 6-10 hours per week
- 11-15 hours per week
- 16 or more hours per week

29. Did you work while in high school? *If no, skip to Question 32.*

Yes No

30. Did your paycheck/wages contribute toward paying household expenses?

Not at all In part In total

31. During your senior year, approximately how many hours per week were you/have you been working?

- 1-5 hours per week
- 6-10 hours per week
- 11-15 hours per week
- 16 or more hours per week

32. During your senior year, did you or anybody in your household participate in any of the following? (If yes, check all that apply.)

- No Yes
- Free or reduced price meal program
 - TANF
 - Food stamps/Lone Star card

33. How well did your high school help you to further develop knowledge and skills in each of the following areas?

a. Writing

Very well Well Somewhat well Not very well Not at all well

b. Mathematics

Very well Well Somewhat well Not very well Not at all well

c. Science

Very well Well Somewhat well Not very well Not at all well

d. Social Studies

Very well Well Somewhat well Not very well Not at all well

e. Computer/Technology

Very well Well Somewhat well Not very well Not at all well

f. Foreign Language

Very well Well Somewhat well Not very well Not at all well

g. Performing/Fine Arts

Very well Well Somewhat well Not very well Not at all well

h. Teamwork

Very well Well Somewhat well Not very well Not at all well

i. Creative thinking

Very well Well Somewhat well Not very well Not at all well

j. Problem solving

Very well Well Somewhat well Not very well Not at all well

k. Conflict resolution

Very well Well Somewhat well Not very well Not at all well

l. Personal Health/Fitness

Very well Well Somewhat well Not very well Not at all well

34. Did you take any Career and Technology Education (CATE) Courses while in high school? *If no, skip to Question 36.*

Yes No

35. How well did the skills that you learned in the CATE courses prepare you for work or further schooling in those areas?

Very well Well Somewhat well Not very well Not at all well

36. Did you ever meet with your school counselor? (If yes, please indicate what types of meetings you had.) *If you choose "did not meet," skip to Question 40.*

No Yes

In class

Outside of class

Individually

37. How well did your counselor(s) advise you in planning your high school course selection?

Very well Well Somewhat well Not very well Not at all well

I never saw my counselor.

38. How helpful were the meetings with your school counselor?

Very helpful Somewhat helpful Not very helpful Not at all helpful

39. For which of the following issues did you meet with a school counselor? (Check all that apply.)

Scheduling

Course Selection and Placement

Poor grades/academic performance

Standardized tests [SAT, ACT, etc.]

Graduation Plans

4 Year Plan

Graduation Credit Verification

Testing Interpretation

Career Information

College Information/Applications

Building Resumes and College Essays

Financial Aid Information/Application

Scholarship Information/Application

Conflict Resolution

Personal and/or Family Issues

Parent Conference

Teacher Conference

Other (please specify): _____

40. On the whole, I liked high school.

Strongly Agree Agree Neutral Disagree Strongly disagree

- Met with my school counselor
- Completed application to Austin Community College (ACC)
- Completed ACC courses (Early College Start, Dual Credit, Tech Prep)
- Ordered and submitted a transcript to a postsecondary institution
- Other (please specify): _____

50. Did you submit any applications for college or training after high school? *If not, skip to Question 55.*

- Yes No

51. Where have you submitted applications for college or training after high school? (Check all that apply.)

- 2-year college
- 4-year college
- Business, technical (trade), or vocational school

52. Where have you been accepted for college or technical training? (Check all that apply.)

- 2-year college
- 4-year college
- Business, technical (trade), or vocational school

53. Do you have a declared major program or field of study?

- Yes (please specify): _____ No

54. Who helped you the **most** in preparing you to apply to college?

- School Counselors
- College Counselor (if different from regular school counselor)
- Teachers
- College Recruiters
- Parents/Family/Relatives
- Friends or peers
- Adult mentor (outside my family)
- My own independent research
- Other (please specify): _____

55. How well informed are/were you about obtaining financial aid for college or postsecondary education (whether or not you applied)?

- Very well Well Somewhat well Not very well Not at all well

56. Who helped you the **most** in obtaining financial aid information for college or postsecondary education (whether or not you applied)?

- School Counselors
- College Counselor (if different from regular school counselor)
- Teachers
- College Recruiters
- Parents/Family/Relatives
- Friends or peers
- Adult mentor (outside my family)
- My own independent research
- Other (please specify): _____

57. Did your parents/family attend a college or financial aid event on or off your high school campus?

- Yes No Don't know

58. Did you apply for any types of financial aid? (If yes, check all that apply.) *If not, skip to Question 60.*

- No Yes
- Non-institutional loan only (e.g. Federal Stafford, Access Loan, A-DEAL, etc.)
 - Institutional loans
 - Scholarships

- Grants
- Work Study
- Other (please specify): _____

59. Describe how easy to understand the process of financial aid was for you and your parents.

- Very easy
- Easy
- Somewhat easy, somewhat difficult
- Difficult
- Very difficult

60. Will you or your family be borrowing any money for college?

- Yes, Definitely
- Yes, Probably
- Maybe
- Probably Not
- Definitely Not
- Don't Know

61. Within a year after graduating from high school, what do you plan to do? (Check all that apply.) *If you do not select "go to college or technical school," skip to Question 63 after completing this one.*

- Go to college or technical school
- Go to work full-time
- Go to work part-time
- Travel
- Be a full-time parent
- Go into the military
- I have no specific plans yet
- Other (please specify): _____

62. How do you plan to further your education?

- Attend a college or university for a postsecondary degree.

Indicate Where: _____

- Attend a school or college for a business, technical, trade or vocational certificate/certification.

Indicate Where: _____

63. If you are not planning to pursue further education or training at this time, do you intend to pursue it at a later time?

- Yes, Definitely
- Yes, Probably
- Maybe
- Probably Not
- Definitely Not
- Don't Know

64. If you are not planning to pursue college at this time, what are your primary reasons? (Check all that apply.)

- Cannot afford to attend school
- Childcare responsibilities
- Don't like attending school
- Grades/test scores aren't high enough
- Don't feel academically prepared for college
- Need income from working
- My career goals do not require college education
- Other (please specify): _____

65. Is there anything else on your mind that we haven't asked about, or anything you would like us to know? Please make your additional comments in the space below.

Thank you for participating in this survey. Your responses will help your school district improve its instruction and other activities to help prepare students for their college and career goals.

We will be sending your \$5 gift certificates to you in the mail at the same address we sent you the survey information post cards. We will also be entering your name in our drawing for the computers. If you haven't received your gift certificate by August 31st, please contact Greg Cumpton at gcumpton@uts.cc.utexas.edu. If the address we sent the post card to is different from the place you want to receive the gift card, please enter the address here:

_____.

If you would like to receive an electronic copy of the final results of this survey, please check this box and provide us with your e-mail address:_____.