STUDY OF TEXAS HIGHER EDUCATION-SPONSORED
P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

MEETING THE CHALLENGE: CREATING COLLEGE OPPORTUNITIES FOR MORE TEXANS

FINAL REPORT

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FOREWORD

Texans have, since the days of the Republic, placed a great deal of faith in the value of a higher education. Mirabeau B. Lamar, Martin Ruter, and countless others through the years have worked to provide Texans opportunities to better themselves through higher education.

However, as extensive as Texas' modern configuration of colleges and universities is, we still find ourselves in a somewhat similar position as our 19th century forebears. Significant portions of our population have not attained a college degree and this lack of experience has tended to perpetuate itself. Compared to other states, Texas is educationally disadvantaged. And, given the current trends in Texas' population growth and current higher education participation and success rates, Texas will be even poorer in the future – unless matters change.

This paper is intended to contribute to the growing effort in Texas to identify and develop effective and affordable ways these current trends may be altered for the better.

ACKNOWLEDGEMENTS

This paper presents an assessment of published materials and other data gathered through this Study effort pertinent to the subject of *Higher Education-Sponsored P-16 Student-Centered Intervention Programs*. It builds on work previously done by or for the Texas Higher Education Coordinating Board and the Texas Education Agency. The report also acknowledges the dedicated efforts of the numerous intervention programs already underway in our state and references other work done in this field both locally and nationally.

This *Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs* has been conducted pursuant to agreements with Prairie View A&M University, Texas A&M University, The University of North Texas, The University of Texas System, The University of Texas at Austin, The University of Texas at Arlington, The University of Texas at Dallas, The University of Texas at San Antonio, the Texas Education Agency and the Texas Higher Education Coordinating Board (THECB). The Texas A&M University System is also a sponsor of the Study through an interagency agreement with the THECB. The project has been made possible through the support of the Institute for Demographic and Socioeconomic Research (the IDSER) and The University of Texas at San Antonio. This paper and the other anticipated products of this Study are, in the first instance, the property of these sponsoring institutions and agencies.

This work would have not been possible without the many contributions made by the staff at the Texas Education Agency and the Texas Higher Education Coordinating Board. Nor would it have been possible without the cooperation of the administrators of the many intervention programs operating in Texas, particularly those who devoted time and energy to fielding our many questions, hosting the site visits, and commenting on our work as it progressed. Without question, these educators are committed to the students they serve and to the idea that all can gain from postsecondary education. Their reward is evident in the many former program participants, now in college, with whom we spoke.

Thanks to Dr. Don Warren, Senior Lecturer with the College of Public Policy and Dr. Jerome Keating, Professor of Management Science and Statistics, both of whom are faculty members at The University of Texas at San Antonio. Dr. Warren is a major contributor to the quantitative analysis; he constructed the sample intervention programs' comparison groups using propensity scores and conducted the statistical tests on the differences in student outcomes.

Special thanks to Dr. Steve Murdock, State Demographer of Texas, Director of the IDSER at The University of Texas at San Antonio, mentor and friend. We also would be remiss if we didn't extend our thanks to Ms. Patricia Bramwell, Ms. Beverly Pecotte, Mr. Jeff Jordan, Mr. Eric Quiroz, and the other staff members who so ably assist Dr. Murdock at the IDSER.

Ms. Nancy Frank and Mr. Davis McAuley provided valuable assistance by reading a draft of the document and offering constructive criticism. Ms. Betty Richardson assisted with several of the programmatic and financial issues associated with the recommendations.

Any errors, omissions, or other shortcomings of this paper should not be attributed in any way to any of the aforementioned individuals or organizations. Such an assessment would be solely the responsibility of the authors, who are listed below.

Earlier abstracts of the literature and the lion's share of the data-gathering work conducted at the THECB are due to the analytical talent and diligence of Ms. Michelle Callaway, who began this project as a graduate student in the Management Science and Statistics Department of the University of Texas at San Antonio. She finishes it with her Master's degree in hand and a good deal of experience. Other former graduate students who provided invaluable assistance with some of the statistical analyses are Ms. Tanya Granston and Ms. Amber Salinas.

Ms. Celeste Rose managed the study's business affairs, assisted with the research, edited, and produced the DRAFT document. Mr. Tom Scott has directed and participated in the overall effort and has led the writing of this report.

(A DRAFT of this report was released in August 2006. The authors thank those who provided some very thoughtful reviews of the DRAFT, including particularly Ms. Cynthia Pence who edited the final version of this report.)

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EXECUTIVE SUMMARY

This *Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs* has two purposes. One is to carefully evaluate P-16 (Pre-school through college) student-centered intervention programs designed to increase college and university participation and success among populations typically underrepresented in Texas higher education. The second is to develop recommendations for model programs to be encouraged in Texas.

These student-centered programs provide a range of direct college-preparatory services to individual elementary and secondary school students and their families. Most Texas programs identified in the course of this Study serve middle and high school students. They are distinct from school-centered programs, which focus on such issues as teacher training, staff development, and general improvements in the curriculum and academic culture of the P-12 schools.

OVERVIEW

Three primary research questions are addressed by this Study:

- How effective are various student-centered programs at increasing college enrollment and graduation for Texas' economically disadvantaged, Hispanic, and African-American[1] students when participants are compared to similar students, in similar settings, who have not been enrolled in these programs?

- Which services of these programs, alone or in combination, account for the greatest differences in higher education participation and success?

- What are the most effective and efficient methods of delivering key services?

To identify effective programs and the key elements that contribute to greater participation and success in higher education, both qualitative and quantitative methods have been used:

- The Study incorporates references to other work that has been published (See Appendix A).

- The Study identifies P-16 intervention programs operating in Texas through a survey of Texas public colleges and universities.

[1] The terms Black and African American are used interchangeably within the body of this document.

- Opinions of student-participants regarding services most helpful to their subsequent college participation and prospects were gathered and analyzed. Conclusions from these analyses are presented in the Study.

- Opinions of administrators of the sample programs about services they deem most critical to the postsecondary participation and success of their students were also gathered and studied. Those conclusions are outlined in the Study.

- Quantitative analyses of high school-to-college participation and success rates of various categories of Texas high school graduates were completed using the student records database that has been assembled through the cooperative efforts of the Texas Education Agency and the Texas Higher Education Coordinating Board. Similarly, postsecondary outcomes for graduates of the sample intervention programs were analyzed and compared to outcomes of comparison groups constructed to match the characteristics of program participants.

FINDINGS FROM THE LITERATURE AND THIS STUDY

- Texas ranks 30th among the states in the proportion of its adult population with at least a bachelor's degree, and significant gaps in educational attainment persist among Texas' various population groups.

- Appropriately designed and timely interventions with middle and high school students can increase college-going rates and, when coupled with rigorous academic preparation, can help remedy the differences in postsecondary success that presently correspond to family income, parents' highest level of educational attainment, and race/ethnicity.

- Rigorous academic preparation in high school is not only a key to prospects for a college or university degree but also for success in the workplace, generally.

- Students must take four critical steps on the pathway to higher education. To enable more students from groups underrepresented in Texas colleges to participate and succeed in postsecondary work, P-16 educators must intervene to assist students in these areas:

    - Students must aspire to and believe they can obtain a higher education and formulate clear educational goals.
    - Students must make plans and properly prepare for higher education.

- Students must negotiate the mechanics of being admitted to and paying for a higher education, arrange for housing, transportation, and other needs, and actually enroll.
- Students must be aware of the challenges to success and be determined to persist in their efforts to realize their goals.

- Texas public universities and community colleges are engaged in a variety of ways in assisting underrepresented students.

  - Texas public universities and community colleges have identified 232 P-16 student-centered intervention programs that served more than 319,000 elementary, middle, and high school students in 2003.
  - In general, Texas programs that have reported college-going data about their former participants have indicated higher education participation rates greater than the national average for recent high school graduates.
  - A closer examination of Texas intervention programs indicates, for several of the programs, college-going rates of former participants that are *significantly* greater than the state average for *all* high school graduates as well as the rates for reference and comparison groups constructed to reflect the racial/ethnic, economic, and other characteristics of the participants.
  - Collaboration between institutions of higher education and P-12 schools that have a dedicated 'college counselor or advisor' to coordinate essential services have demonstrated success in greater college enrollment and persistence for graduates of their programs.

- Essential services provided by effective programs include:

  - Early information about the benefits and availability of higher education and the key steps that must be taken to participate and succeed in college;
  - Academic counseling/advising, particularly the necessity to follow the preparatory path of at least the Recommended High School Program, and more with respect to advanced math courses;
  - Development of study/academic skills;
  - P-12 school-to-college transition activities and experiences;
  - Assistance with financial aid and admission applications and processes, and entrance test preparations; and
  - Dual credit/concurrent enrollment opportunities.

To have the kind of impact needed to substantially increase college participation and success, Texas colleges, universities, and P-12 schools should join forces to intervene in the traditional educational processes.

RECOMMENDATIONS

This Study proposes that:

- The state should foster intervention programs incorporating at least the six essential services identified above in a manner that combines the resources and strengths of both the state's P-12 schools and institutions of higher education. Such a menu of services, in conjunction with a rigorous high school curriculum, would greatly aid students to master the key steps to participation and success in postsecondary education.

- P-16 collaborative intervention programs should involve elements of several existing outreach programs provided by colleges and universities, a rigorous high school curriculum, certain duties of financial aid officer positions employed by several Texas school districts, and greater use of dual/concurrent enrollment programs.

- Plans to enhance the probability of students enrolling and succeeding in postsecondary education should include intervention in the middle school years to inspire and encourage students to plan for postsecondary work, coupled with focused efforts in the high school years to prepare for success and to negotiate the mechanics of being admitted to and paying for a higher education and arranging for housing, transportation, and other needs.

- Each Texas school district should prepare and adopt a *Postsecondary Readiness, Participation, and Success Plan* that is consistent with the plans and requirements of HB 1, 79th Texas Legislature, 3rd CS and the participation and success goals of the Texas Higher Education Plan, Closing the Gaps by 2015. Such a *Plan* should capitalize on financial assistance available through the federal government as well as from local and state sources.

- A position should be created within each participating high school to be known as the *College Counselor*. Subject to the direction of the principal and with the participation of the high school faculty, guidance counselors, and outreach representatives of the partnering institution(s) of higher education, this person would coordinate the development and implementation of the local *Plan.* The Study outlines the ideal resources necessary to the success of this position.

- A corresponding Texas Outreach Program should be created by the institution(s) of higher education that partner with high schools in the development and implementation of the *Plan.*

- The Texas Education Agency and the Texas Higher Education Coordinating Board should provide support and direction to local *Plan* participants and jointly implement an accountability system to track student progress through the state's system of P-16 institutions. It is also recommended that these agencies conduct an ongoing, joint assessment of the progress toward achieving the goals and objectives of the state and local plans.

- The state should provide funds not available from federal or other sources to implement these efforts.

BENEFITS

- Benefits of higher education accrue to both the individuals involved and society, generally. Individuals benefit from greater employability and earnings through which they and their families enjoy a richer quality of life. Society also reaps social and economic benefits. On the whole, college educated individuals tend to engage more in volunteer activities and in other aspects of community and civic life, while higher levels of education add significant value to the total economy.

- Based on the work of the Texas Comptroller of Public Accounts, this Study estimates that each graduate from a Texas college with a bachelor's degree will add $373,000 (in 2006 dollars) to the Texas economy. Obtaining some college, though not a degree, is expected to add $114,000 to the Texas economy.

- The cost of using personnel in the high school combined with outreach personnel from institutions of higher education is less expensive than other effective intervention models. It is estimated that the model program's annual costs would be $132 per student for the students in the 8th through 12th grades of the target schools that implement the program. This amount is hundreds of dollars less, per student, than other models. The lower costs enable implementation of this proposal on a broader scale than might otherwise be possible.

- The benefit/cost ratio of this proposal could exceed 20:1.

- In addition to the direct benefits, other advantages would also accrue to the state because of these efforts. Better prepared and focused students would result in students taking fewer remedial courses while

in college and more students obtaining the certificates and degrees they seek. The first wave of better educated Texans who would benefit from these programs would pass along their experience to their children thereby increasing the odds that their offspring would also obtain college educations.

- Other potential benefits include financial savings for the student who completes college-level courses while in high school or receives college credit for AP courses, and the completion of more college degrees, in less time, due to better preparation and pre-college completion of some necessary coursework. This analysis does not attempt to calculate the dollar value of such additional benefits.

The costs to Texas of not successfully addressing present disparities in educational attainment are profound. They include not only the advantages described above that would not be realized, but the dollar costs to the Texas economy of forgone earnings that would not be recaptured. Based on the benefit/cost example in this Study, the cost to the Texas economy of not remedying the college-going disparity that exists between the graduates of high schools with greater numbers of economically disadvantaged students and schools with students from more prosperous families could exceed $1 billion a year. This loss to the Texas economy would occur every year the disparity persists.[2]

[2] See Appendix G for a discussion of the ideal budget of the Study's recommended plan of action and the estimated benefit/cost impact to Texas associated with the recommendations.

INTRODUCTION

The *Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs* was initiated with:

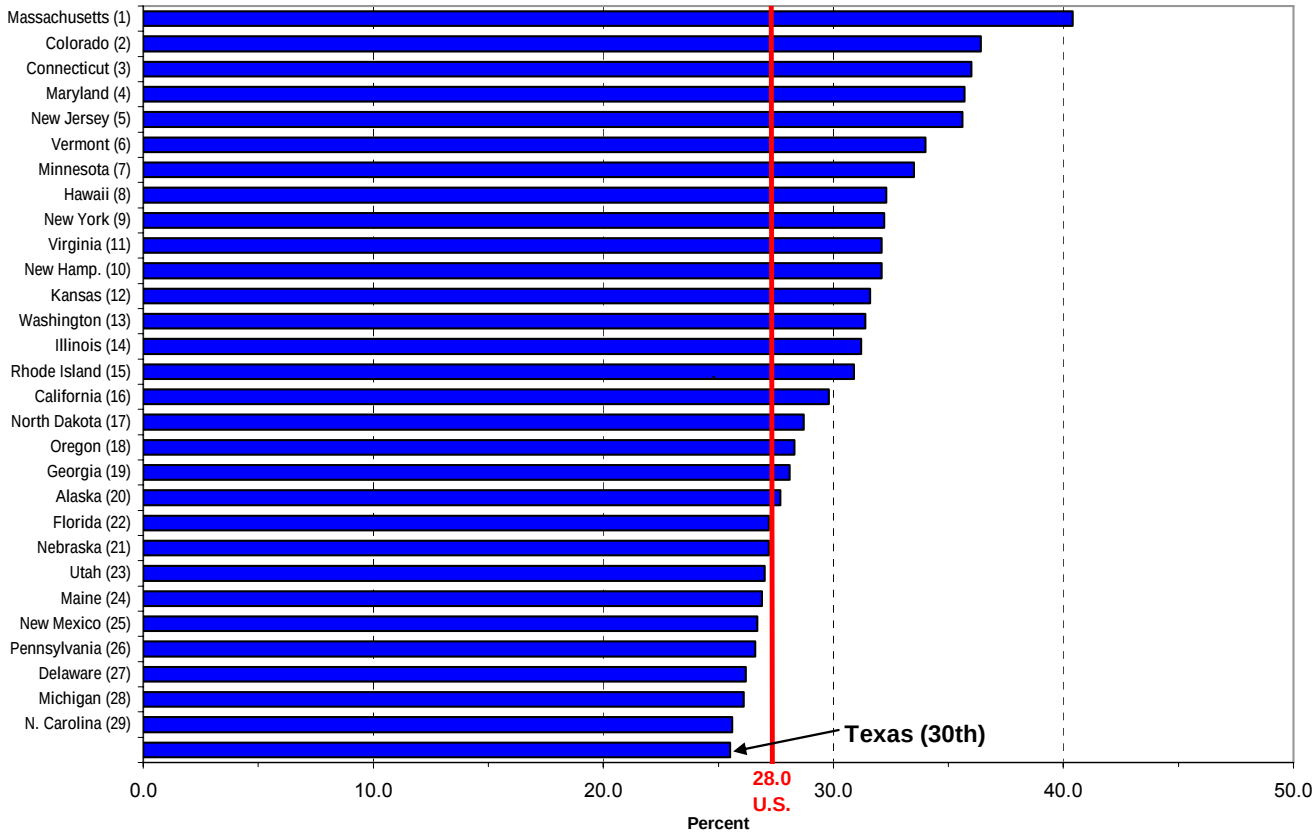
- a recognition that the State of Texas is underachieving with respect to higher educational attainment,
- a belief that the current situation can be changed – that more Texans can participate and succeed in college work, and
- while there are a wide variety of efforts to change present conditions, some of the potential tools are poorly understood and may not be as effectively deployed as possible.

Texans have been 'underachieving' for some time now. In 1990, only 20.3 percent of Texas' population age 25 and older had obtained at least a bachelor's degree.[3] Texas' percentage, at the time, equaled that of the U.S. as a whole; nonetheless, Texas ranked 23rd among the states on this standard indicator of educational attainment (excluding the District of Columbia).[4] However, by 2000, even though proportionately more Texans had a college degree, the gap between Texas and other states had become even more apparent and was widening.

In 2000, Texas ranked 26th among the states with a 'college degree ratio' that was 95 percent that of the U.S. as a whole.[5] More recent data now have Texas ranked 30th among all states and its 'college degree ratio' has slipped—to only 91 percent of the U.S. average. Chart 1 illustrates this situation for 2006[6].

[3] U.S. Department of Commerce. U.S. Census Bureau. Educational Attainment: 2000-Census 2000 Brief. August 2003.13 March 2006. http://www.census.gov/prod/2003pubs/c2kbr-24.pdf.
[4] U.S. Department of Commerce. U.S. Census Bureau. Educational Attainment: 2000-Census 2000 Brief.
[5] U.S. Department of Commerce. U.S. Census Bureau. Educational Attainment: 2000-Census 2000 Brief.
[6] U.S. Census Bureau. Current Population Survey. Table 13. Educational Attainment of the Population 25 Years and Over, by State...:2006. March 15, 2007. 4 July 2007. http://www.census.gov/population/www/socdemo/education/cps2006.html

Chart 1. States Ranked by Percent of the Population 25 Years and Older with Bachelor's or Higher Degree, 2006



Texans are not going to college at rates comparable to the populace of other states, nor are they obtaining degrees at comparable rates. Moreover, there are also educational attainment gaps within Texas, particularly among the State's several racial/ethnic/economic groups. In 2006, 34 percent of White Texans 25 years old and older were estimated to have at least a bachelor's degree while only 20 percent of Black Texans and 9 percent of Hispanic Texans among this age group were determined to have gained at least a bachelor's degree.[7]
The Texas Higher Education Coordinating Board (THECB) has recognized these disparities and, in 2000, adopted a plan entitled Closing the Gaps by 2015,[8] also known as the Texas Higher Education Plan, to address these issues.

[7] U.S. Census Bureau. Current Population Survey. Table 14. Educational Attainment of the Population 18 Years and Over, by Age, Sex, Race Alone, and Hispanic Origin, for the 25 Largest States: 2006. March 15, 2007. 4 July 2007. http://www.census.gov/population/socdemo/education/cps2006/tab14.xls

[8] Texas Higher Education Coordinating Board. Closing the Gaps by 2015: The Texas Higher Education Plan. October 2000. 13 March 2006. http://www.thecb.state.tx.us/reports/PDF/0379.PDF.

There are well documented reasons for state initiatives to promote greater educational attainment - for both the individuals directly involved and for all of us who enjoy the benefits of a healthy Texas society and economy. One of the more measurable advantages of education is the economic well-being associated with higher education. Many reports have addressed this issue and they consistently indicate the extraordinary value of a postsecondary education.

Data available through the U.S. Bureau of Labor Statistics confirm that those who possess at least a bachelor's degree and who are in the labor market are less likely to be unemployed than those who have only a high school diploma.[9] In 2006, those ages 25 and older with only a high school diploma exhibited an unemployment rate that averaged 4.3 percent for the year. The unemployment rate for workers and job seekers with at least a bachelor's degree was less than half (2.0 percent) that of the high school diploma-only group.

Not only are those in the job market who are more highly educated more likely to be employed, they can also look forward to enjoying higher wages. A young person just out of college, regardless of race/ethnicity, stands an excellent chance of making at least half again as much as one with only a high school education. Young college-educated White adults (ages 25 to 34) have median earnings that are 46 percent greater than their high school diploma-only counterparts. Young college-educated Hispanic workers earn 75 percent more than their respective reference group, while similarly situated Black workers earn 71 percent more. These gaps in income based on education levels have widened significantly in the last 25 years.[10]

The Texas Comptroller of Public Accounts has reported that average earnings for workers of all ages, for those who have earned at least a bachelor's degree, are consistently more than twice as great as the earnings of those with just a high school education.[11] This is true in Texas as well as nationally. The higher earnings and productivity of students who have spent time pursuing a higher education eventually increases Texas state economic capacity by an estimated $23 billion per year.[12] The stronger Texas economy that results from a more educated workforce benefits everyone.

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[9] U.S. Department of Labor. Bureau of Labor Statistics. Employment Status of the Civilian Noninstitutional Population 25 Years and Over by Educational Attainment, Sex, Race, and Hispanic or Latino Status. 4 July 2007. http://www.bls.gov/cps/cpsaat7.pdf.

[10] U.S. Department of Education. National Center for Education Statistics. (2007) The Condition of Education 2007. NCES 2007-064. June 2007. (See Table 20-2, Annual Earnings of Young Adults) http://nces.ed.gov/pubs2007/2007064.pdf.

[11] Texas Comptroller of Public Accounts. The Impact of the State Higher Education System on the Texas Economy - Special Report. February 2005. page 19. 13 March 2006. http://www.window.state.tx.us/specialrpt/highered05/highered05.pdf,

[12] Texas Comptroller of Public Accounts. The Impact of the State Higher Education System on the Texas Economy - Special Report. page 2.

However, educated individuals do not just generate greater economic benefits. Broader and greater education levels also translate into greater civic activity and volunteerism that benefits society generally. Adults with a college education typically volunteer through an organization at rates approximately 57 percent greater than those with just a high school diploma.[13]

Texans and Texas are decidedly stronger, economically and otherwise, because of those who have obtained a post-secondary education. Trained and highly educated workers possess a greater capability to provide a wider range of goods and services for all. Whether they are emergency first-responders trained in community colleges or engineers and teachers educated at universities, their work provides advantages for everyone.

The benefits of higher levels of education are compelling and make it even more important that Texas take bold steps to increase the educational attainment of more of its citizens.

But Texas has much to do to elevate its educational assets. Too many young Texans do not go on from high school to college, persist with their college work, and graduate. It has been estimated that barely one-third of Texas' ninth graders will graduate from high school on time and immediately enroll in college, and that only 13 percent will have obtained an associate's degree within three years or a bachelor's degree within six years at the institution in which they first enrolled.[14] Texas ranks 36th among the states in the rate at which students graduate high school and timely enroll in higher education. [15]

This Study flows from these facts and concentrates on an analysis that evaluates student-centered intervention programs operated by Texas public elementary and secondary schools and higher education institutions that are designed to increase college and university participation and success among populations typically underrepresented in Texas higher education. These intervention programs usually work with students in the middle or high school years to help inspire them to seek a higher education, to help them better prepare for such an undertaking, and to assist them in a variety of ways to negotiate the application, financial aid and other processes associated with attending a college or university.

A second purpose of the Study effort is to develop recommendations regarding model intervention programs to be encouraged in Texas to close current

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[13] Cunningham, Alisa. The Broader Societal Benefits of Higher Education. SolutionsforOurFuture.org. Washington, D.C. 2005. 15 March 2006. http://www.solutionsforourfuture.org/site/DocServer/07.Social-Benefits.pdf?docID=102.

[14] The National Center for Public Policy and Higher Education. Policy Alert: Educational Pipeline Success Rate. April 2004.15 March 2006. http://www.highereducation.org/reports/pipeline/success.shtml.

[15] The National Center for Public Policy and Higher Education. Policy Alert: Educational Pipeline Success Rate.

educational attainment gaps among different groups of Texans and to elevate Texas' overall educational attainment.

As the next chapter illustrates, Texas has some distinct challenges to closing the gaps in postsecondary participation and success.

CLOSING THE GAPS IN PARTICIPATION AND SUCCESS IN TEXAS HIGHER EDUCATION

Through the last two decades, Texas' public education officials at all levels have increasingly expressed concerns about shortcomings in educational achievement. As a consequence, they have engaged in a number of efforts to address these issues.

The Closing the Gaps by 2015 report illustrates the different higher education enrollment rates of African American and Hispanic Texans compared to the White (and others) population in Texas. At the time the Closing the Gaps by 2015 plan was prepared, it was estimated that the Hispanic college enrollment rate was 3.7 percent of the Hispanic population in Texas and that African Americans were enrolled at a rate of 4.6 percent. These rates were in contrast to the 5.1 percent college enrollment rate estimated for White Texans. The plan, however, also illustrates that enrollment rates for all Texans, including the White population, must increase if Texas is to close the gaps with other states. The goal established for Texas' total population was (and remains) an enrollment rate equivalent to 5.7 percent, to be attained by 2015.[16]

As a corollary to the differences in participation, the Plan also recognizes gaps in rates at which Texans have succeeded in higher education, as measured by earned degrees and certificates. As it does for participation rates, the Plan sets specific goals for increases in higher education degrees and certificates that would be awarded by 2015.

The significance of current 'gaps' is amplified when one examines the trends in population growth in Texas and the implications of these changes in terms of their impact on Texas' future economic well-being. The major segment of Texas' population with higher college attainment rates, the White population, is expected to steadily decline as a proportion of the total population---from 53 percent in 2000 to less than 30 percent by 2040. That part of Texas' population that currently has lower college participation and success rates, Hispanic Texans, is expected to comprise 58 percent of the total population in 2040. Black Texans are expected to make up 8 percent of the total.[17] The expected change in the proportions of the population is particularly noticeable for the traditional college-age group, those whose ages range from 18-24.

[16] Texas Higher Education Coordinating Board. Closing the Gaps by 2015.
[17] Texas State Data Center and Office of the State Demographer. Texas Population Projections Program. 2004 Population Projections. Table 2, Population Projections for the State of Texas. 13 March 2006. http://txsdc.utsa.edu/tpepp/2004projections/.

White 18-24 year-old Texans comprised 44 percent of the state total for that age group in 2000; that proportion is anticipated to be halved by 2040, to 22 percent. Black 18-24 year-olds were 12 percent of the total 18-24 age group in 2000 and are expected to decrease to 8 percent by 2040. Hispanic Texans in this age group will increase from 40 percent of the total to 64 percent over the same period, to then equal almost two-thirds of the traditional college-age population in Texas.[18]

It is with this latter group that the greatest challenge and opportunity for improving Texas' educational standing lies.

While not specifically addressed as a distinct target group of the Closing the Gaps plan, *economically disadvantaged* students in Texas, regardless of race or ethnicity, are those who are particularly at an *educational disadvantage*. College participation by students from economically disadvantaged families in Texas lags significantly that of similarly situated students in other states. In 2004, the overall college participation rate for economically disadvantaged Texans was estimated to be 20.9 percent. Texas ranked 39th among the states in this measure of college participation.[19]

In 2005, Texas ranked fourth among all states in the proportion of its school children approved for subsidized school lunches, the principal measure used to indicate whether or not a student is economically disadvantaged.[20] But the Texas school-to-college pipeline is increasingly characterized by students who are economically disadvantaged. In the 1999-2000 academic year, 49 percent of Texas' schoolchildren were classified as economically disadvantaged. This proportion has grown steadily in the years since. For the 2005-2006 school year, 2.5 million students, 55.5 percent of the Texas P-12 student body, were so classified.[21]

Because disproportionate numbers of Black and, particularly, Hispanic students are among the economically disadvantaged, such a trend only magnifies the challenge to enable more young Texans to participate and succeed in higher education.

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[18] Texas State Data Center and Office of the State Demographer. Texas Population Projections Program. 2004 Population Projections. Table 2, Population Projections for the State of Texas.
[19] Postsecondary Education OPPORTUNITY. College Participation Rates for Students From Low Income Families by State 1992-93 to 2003-04. Volume 163. Oskaloosa, Iowa, January, 2006.
[20] Postsecondary Education OPPORTUNITY. National School Lunch Program Participation by State FFY1993 to FFY2005. Volume 165. Oskaloosa, Iowa, March, 2006.
Note: In Texas, students are determined to be economically disadvantaged if eligible for free or reduced-price lunch or eligible for other public assistance.
[21] Texas Education Agency. Academic Excellence Indicator System and Standard Reports. April 2006. http://www.tea.state.tx.us/perfreport/aeis/ and http://www.tea.state.tx.us/adhocrpt/.

Since 2000, some progress in participation and success has been noted by the Texas Higher Education Coordinating Board. There have been some gains for Hispanic and Black Texans, but significant unfavorable gaps still exist.

The THECB routinely monitors the rate at which Texas high school graduates are enrolling in Texas institutions of higher education in the fall following graduation. In recent years, the Board has developed the capacity to track students into both private as well as public institutions. Using that capacity, this Study determined that in 2003 approximately 42 percent of the Black high school graduates in Texas enrolled in Texas colleges and universities in the fall following their graduation. Hispanic graduates enrolled at a rate approximating 39 percent of the graduating class. This experience is in sharp contrast to the college-going rate of White students that year of 56 percent.

In 2004, the enrollment rates for Black and Hispanic high school graduates increased slightly. However, Black and Hispanic high school graduates were going to college in 2004 in that first fall following graduation at a combined rate not quite three-quarters that of the college-going rate of the White students.

The gap narrowed only marginally in 2005 when 57 percent of White high school graduates were found enrolled in Texas' higher education institutions in the fall of 2005 and only 42 percent of Black and Hispanic graduates were located in Texas colleges.[22]

If additional gains in educational attainment by these Texans do not occur in the future, not only will the individuals in these groups be disadvantaged, but Texas is likely to be a poorer state than it is now. Texas' labor force, overall, will be less well educated than it otherwise could be and increasingly out of sync with the educational demands of a changing economy. Average real household income in Texas could actually decrease in the future.[23]

There is an alternative. The Texas Higher Education Plan offers a vision of a more educated and prosperous Texas. The most significant key to realizing that vision involves raising the higher education participation and success rates for Black, Hispanic, and White Texans, particularly those who are economically disadvantaged.

One of the strategies identified by the Plan is to intervene directly with students and their families to foster aspirations and to promote preparations for higher education. It suggests that public education and higher education must work

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[22] Texas Higher Education Coordinating Board. Texas High School Graduates From FY 2002-2005 Enrolled in Texas Higher Education Fall 2002-2005. 9 June 2006. The group with the highest college-going rate in 2004 was Asian Texans, whose matriculation rate was 64%. The THECB reports all high school graduates regardless of student identifier.

[23] Murdock, Steve H., et al. The New Texas Challenge. College Station. Texas A&M University Press, 2003. page 62.

arm-in-arm with the business community and civic organizations to motivate, encourage, and equip students at every level to prepare for higher education.

Institutions of higher education, working with public schools, have established a number of programs to pursue this strategy. One set of programs, which are the subject of this Study, involves intervention with elementary, middle, or high school students and their families, targeting students who might not otherwise attain a higher education.

CHALLENGES TO GREATER PARTICIPATION AND SUCCESS IN HIGHER EDUCATION

There are several key steps all students must take if they wish to enhance the odds of their successful participation in postsecondary education:

1) *Students must aspire to and believe they can obtain a higher education and formulate clear educational goals.* (Studies demonstrate that students without clear degree goals are less likely to persist in college work.)
2) *Students must make plans early and properly prepare for higher education.*
3) *Students must negotiate the mechanics of being admitted to and paying for a higher education and, as necessary, arrange for housing, transportation, and other needs.*
4) *Students must be prepared to persist in their efforts to realize their goals.*

These are the steps to a higher education degree that all students must undertake, yet some face greater hurdles than others. This chapter examines the characteristics of students typically underrepresented in higher education and illustrates the magnitude of the challenges to 'closing the gaps' in Texas. The Literature Review in Appendix A provides additional information about the principal characteristics of these students and the barriers they face.

CHALLENGES TO PARTICIPATION IN HIGHER EDUCATION AND CHARACTERISTICS OF STUDENTS AT RISK

There are students for whom the steps outlined above too frequently become extraordinary challenges to participating in higher education. Principal among these groups are large numbers of economically disadvantaged students and those who are potential first-generation college students. These characteristics apply to many of Texas' Hispanic and African American students, as well as to relatively smaller numbers of White students.[24] Difficulties with respect to postsecondary success for these students begin early in their educational career and affect their expectations, preparations, and negotiation of key steps of the critical path to their educational future.

For students to succeed in college they must want and expect to continue their education, they must prepare themselves and make plans to enroll. In addition, they must take and excel on entrance exams, apply for admission, and seek

[24] 'First-generation college students' are variously defined as students for whom: neither parent has any postsecondary education; or, if either parent attended a 2-year or 4-year institution they did not complete any degree or certification requirements; or, more particularly, they did not obtain at least a bachelor's degree.

financial aid, if necessary. These factors in the college-going process are influenced not only by the educational level of the students' parents, but also by co-related factors such as family income and the racial/ethnic background of the family.[25]

America's Students

In 1992, 40 percent of America's White high school seniors had a parent(s) who had obtained a college degree, while only 26 percent of the Black students and 20 percent of the Hispanic students had a parent who had done so.[26]

While there have been overall gains in educational achievement since, these parental gaps in attainment for potential first-generation college students appear to have persisted. A decade later, 43 percent of America's White high school sophomores (the senior class of 2004) had at least one parent who had earned at least a 4-year degree while only 31 percent of the Black students and 21 percent of the Hispanic students had at least one parent who had completed college.[27]

Students also have disparate socioeconomic backgrounds along racial/ethnic lines. Members of America's class of 2004, as sophomores, were distributed among the several socioeconomic levels in uneven proportions as they were among different parental educational attainment levels. Only 16 percent of the White students were in families in the lowest socioeconomic (SES) quartile, while 35 percent of the Black and 50 percent of the Hispanic students were from the lowest SES quartile. Thirty-two percent of the White students were in the highest SES quartile, while only 12.9 percent of the Black students and 9.7 percent of the

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[25] U.S. Department of Education. National Center for Education Statistics. Access to Postsecondary Education for the 1992 High School Graduates. NCES 98-105. By Lutz Berkner and Lisa Chavez. Washington DC: 1997. Page 15. http://nces.ed.gov/pubs98/98105.pdf.
[26] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Senior in 1992. NCES 95-384, by Green, Dugoni, Ingels, and Camburn (NORC). Washington DC: 1995. Page 10. http://nces.ed.gov/pubs95/95384.pdf.
[27] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Sophomore in 2002: Initial Results from the Base Year of the Education Longitudinal Study of 2002. (NCES 2005–338). by Ingels, Burns, Chen, Cataldi, and Charleston. Washington, DC: 2005. Pages 10-15. http://nces.ed.gov/pubs2005/2005338.pdf.

Note: Much of these data derived from reports prepared by the National Center for Education Statistics (NCES) are from data obtained through the various Education Longitudinal Studies conducted by the NCES. These studies deal with the transition of American youth from secondary schooling to subsequent education and work roles. The Education Longitudinal Studies began in 1972, while others were begun in 1980, 1988, and 2002. The most recent, ELS: 2002, follows a nationally representative cohort of students from the time they were high school sophomores through the rest of their high school careers. Through the Summer of 2006, the most complete data on high school seniors and graduates were for the class of 1992. The ELS has only just begun to yield information about the high school sophomores of 2002 and seniors of 2004. More may be learned about the ELS at: http://nces.ed.gov/surveys/els2002/.

Hispanic students were in the highest quartile.[28] Because of the co-relationship of these variables, programs that increase access for first-generation students may also do the same for low-income and minority students.[29]

Differences in parents' education, socioeconomic status, and race/ethnicity are associated with differences in student educational expectations, which in turn are also related to actual postsecondary outcomes.[30]

Table 1 illustrates how students' expectations about their educational future vary across the variables discussed above. Students' expected level of academic achievement, characterized here as the expectation of attaining at least a bachelor's degree, varies by race/ethnicity, parents' education, and socioeconomic status.

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[28] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Sophomore in 2002: Initial Results from the Base Year of the Education Longitudinal Study of 2002.
Note: The socioeconomic status index used in the NCES study is a composite of the students' parents' educational attainment, occupations and family income.
[29] U.S. Department of Education. National Center for Education Statistics, Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence, and Attainment, NCES 2001–126, by Susan Choy. Washington, DC: 2001. http://nces.ed.gov/pubs2001/2001126.pdf.
[30] U.S. Department of Education. National Center for Education Statistics. Access to Postsecondary Education for the 1992 High School Graduates. page 15.

Table 1. Percent of America's High School Seniors by Expected Level of Educational Attainment and Selected Student Characteristics, Class of 2004[31]

Characteristic	Students Expect To Attain At Least a 4 -Year College Degree	Students Don't Know
Total	**68.5%**	**8.4%**
Race/Ethnicity		
Hispanic	57.0%	13.5%
Black	67.4%	8.8%
White	71.0%	7.0%
Parents' Education		
High School or Less	51.8%	11.5%
Some College	65.0%	9.0%
College Graduate	78.6%	6.2%
Graduate/Professional Degree	86.0%	5.6%
Socioeconomic Status		
Lowest Quartile	50.8%	12.1%
Middle Two Quartiles	66.4%	8.8%
Highest Quartile	86.6%	4.6%

As significant as the variation in the fractions of these students who aspire to a bachelor's degree are the differences among the students in the percentage that 'Don't Know' what to expect.

Overall, 59 percent of the members of the nation's senior class of 2004 were *potential* first-generation college graduates (neither parent has a degree from a 4-year college).[32]

While data on the college-going behavior of the class of 2004 are not yet available, the National Center for Education Statistics (NCES) has reported on the postsecondary enrollment experience of the American high school class of 1992 (which, through the Summer of 2006, was the next most recent high school class for which the NCES had conducted a longitudinal study).

The NCES found that by 1994 the postsecondary enrollment patterns of the Class of 1992 reflected the same kind of differences among racial/ethnic, socioeconomic status, and parental education groups that have been identified in

[31] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Senior in 2004: A First Look—Initial Results From the First Follow-up of the Education Longitudinal Study of 2002 (ELS:2002) (NCES 2006–348). by Ingels, Planty, and Bozick. Washington, DC: 2005. Page 16. http://nces.ed.gov/pubs2006/2006348.pdf.

[32] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Senior in 2004: A First Look—Initial Results From the First Follow-up of the Education Longitudinal Study of 2002 (ELS:2002)

the various surveys of not only this but other student cohorts. Ninety-three percent of the students whose *parents* had graduated from college were found to have enrolled in some kind of postsecondary educational institution while only 59 percent of those whose *parents* had had no college experience had enrolled. Similarly, the postsecondary enrollment rates of Hispanic and Black students were lower than those of White students. As striking as the differences in college-going rates between the potential first-generation students and others are, are the differences between those who were in the lowest socioeconomic group and those in the other socioeconomic categories. Less than one-third of the students from the low income families had enrolled in a 4-year institution, while more than three-quarters of the students from high income families had gone to a 4-year institution.[33]

High school graduates from the lowest family income backgrounds are least likely to continue into college immediately after high school and those from the highest family incomes are most likely to pursue education in college. Of particular note, when family income is controlled, Blacks and Hispanics often continue into college at greater rates than White high school graduates.[34]

Texas' Students

Texas' experience mirrors that of the nation. The large numbers of poor Texans and potential first-generation students, particularly those among the fast growing Hispanic population, comprise the particular challenge of the Texas Higher Education Plan. These features of the Texas student population play a significant role in Texas' overall 'gap' in relation to other states. Table 2 illustrates two of these key variables.

[33] U.S. Department of Education. National Center for Education Statistics. Access to Postsecondary Education for the 1992 High School Graduates, NCES 98-105. Table 2, page 7.
[34] Postsecondary Education OPPORTUNITY. College Continuation Rates by Family Income for Recent High School Graduates 1987 to 2004. Volume 168. Oskaloosa, Iowa, June, 2006.

Table 2. Number of Texas Public High School Graduates, Classes of 2000 and 2005, and Percent Classified as Economically Disadvantaged by Selected Race/Ethnicity Characteristics[35]

Group	Class of 2000	Class of 2005
All Public High School Graduates	*212,925*	*239,716*
Percent of *All* Who Are Economically Disadvantaged	24.8%	31.4%
Hispanic Public High School Graduates	*68,314*	*84,566*
Percent of *Hispanic* Who Are Economically Disadvantaged	50.4%	56.1%
Black Public High School Graduates	*27,507*	*32,811*
Percent of *Black* Who are Economically Disadvantaged	31.7%	41.2%
White Public High School Graduates	*109,721*	*113,212*
Percent of *White* Who are Economically Disadvantaged	7.5%	10.9%

The disadvantage of lower income appears to fall particularly hard on Hispanic high school graduates. On the other hand, while in 2005 White graduates made up 47 percent of the graduating class, White graduates comprised only 16 percent of the total number of economically disadvantaged graduates.

The proportion of Texas' high school graduates who are classified as economically disadvantaged has grown from 25 percent in 2000 to over 31 percent in 2005. As discussed previously, Hispanic, Black, and, in fact, all students who are economically disadvantaged have historically been underrepresented in postsecondary education.

The apparent relationship between race/ethnicity and economic status of Texas students appears to be related to the differences in educational attainment of the students' parents. In 2000, 49 percent of the students in Texas' public schools were economically disadvantaged. It is also estimated that in that year, 42 percent of the children, ages 0-17, in Texas were in families in which neither parent had attended college. Table 3 illustrates this convergence of economic and educational attainment. Given the relationship between education and income, as discussed in the Introduction, it is not surprising that children from groups whose parents have lower educational attainment would also be economically disadvantaged in greater numbers.

[35] Texas Education Agency. Statewide Counts of Economically and Non-Economically Disadvantaged Students and Graduates by Ethnicity for Years 1999-2000 through 2004-2005. Data Request 2006-04-00023. April, 2006.

Table 3. Economically Disadvantaged Public School Students and Educational Characteristics of Parents of Texas Children Ages 0-17, in 2000[36]

	White	Black	Hispanic	All Groups
Texas Public School Students				
Percent of Public School Students of Selected Texas Racial/Ethnic Groups Who Are Classified as Economically Disadvantaged	21%	64%	75%	49%
Texas Children Ages 0-17				
Percent of Children of Selected Texas Racial/Ethnic Groups With Parents Attaining High School Diploma or Less	22%	42%	66%	42%
Percent of Children of Selected Texas Racial/Ethnic Groups With Parents Attaining at Least a Bachelor's Degree	42%	19%	11%	28%

Note: Data for 'All Groups' include other racial/ethnic groups not separately illustrated in this table.

On the national level, it is estimated that 35 percent of children ages 0-17 are in families in which neither parent has progressed beyond high school while 32 percent have parents with at least a bachelor's degree.[37] Texas' lower standing compared to the U.S. points up the magnitude of the challenge facing the state. An estimated 2.2 million children in Texas have parents whose ability to effectively assist them in negotiating their way to a college degree, based on their own educational inexperience beyond high school, will be tested. Another 1.4 million young Texans are estimated to be in families in which the parents have some college but have not attained at least a bachelor's degree. These children, too, may expect to face challenges to obtaining a college degree.

As Table 4 illustrates, despite some apparent progress for certain student categories in recent years, disparities in participation in Texas remain. For the class of 2004, 59 percent of all Texas high school graduates (with valid SSNs) for that year were found enrolled in a Texas public or private 2-year or 4-year

[36] Data on *economic status of students* prepared by the Texas Education Agency from Statewide Counts of Economically and Non-Economically Disadvantaged Students and Graduates by Ethnicity for Years 1999-2000 through 2004-2005. Data Request 2006-04-00023. April, 2006. Data on *educational attainment of students' parents* prepared by the Texas State Data Center, The University of Texas at San Antonio, from Public Use Microdata Sample (PUMS) files provided by the U.S. Bureau of the Census (2000 Decennial Census).
Note: The Texas Education Agency does not routinely collect data on students' parental educational attainment levels.

[37] Texas Education Agency. Statewide Counts of Economically and Non-Economically Disadvantaged Students and Graduates by Ethnicity for Years 1999-2000 through 2004-2005. Texas State Data Center. Public Use Microdata Sample.

institution of higher education in the following academic year. However, the enrollment rate for those who were economically disadvantaged was only 48 percent, barely three-quarters the rate at which non-economically disadvantaged graduates enrolled. Of the major racial/ethnic groups in Texas, the disparity in college enrollment rates, based on economic status, was greatest for White economically disadvantaged students. Only 40 percent of these students were enrolled in higher education in the year following their high school graduation.

Table 4. Percent of Texas High School Graduates, Classes of 2002 and 2004, Found in Texas Higher Education Institutions in the Following Academic Years[38]

Group	Class of '02 Found in AY 2002-03	Class of '04 Found in AY 2004-05
All Public High School Graduates	*59%*	*59%*
All Economically Disadvantaged H.S. Graduates	47%	48%
All Non Economically Disadvantaged H.S. Graduates	64%	64%
Hispanic Public High School Graduates	*51%*	*52%*
Hispanic Economically Disadvantaged H.S. Graduates	48%	49%
Black Public High School Graduates	*52%*	*54%*
Black Economically Disadvantaged H.S. Graduates	46%	48%
White Public High School Graduates	*65%*	*64%*
White Economically Disadvantaged H.S. Graduates	39%	40%

Disparities in *prospective* college participation are apparent in high school. Texas high school seniors are canvassed prior to graduation about their postsecondary plans and, while the survey responses appear to overstate the actual subsequent enrollment behavior, the pattern of expectations of Texas seniors resembles that of the national sample discussed earlier. Hispanic, Black, and economically disadvantaged Texans, generally, appear to be less inclined to plan for college.

Texas seniors in the class of 2005 were asked about plans to enroll in 2-year or 4-year college programs within a year of graduation. Their responses are set out in Table 5. As the reader will note, students' stated intentions exceed the percentage actually found in Texas institutions by approximately 25%.

[38] Data derived from the database developed for this Study from Texas Education Agency and Texas Higher Education Coordinating Board files.
Note: The Texas High School Class of 2002 was the first graduating class for which the THECB could track students' progress into both public and private Texas institutions of higher education. The data in this table reflect only those students in the Texas Higher Education Coordinating Board database who have valid social security numbers.

Table 5. Percent of Texas High School Seniors, Class of 2005, Indicating Plans to Enter a Degree-Granting College Program Within One Year of HS Graduation[39]

Group	Class of 2005
All Public High School Graduates	*74%*
All Economically Disadvantaged H.S. Graduates	68%
All Non Economically Disadvantaged H.S. Graduates	76%
Hispanic Public High School Graduates	*70%*
Hispanic Economically Disadvantaged H.S. Graduates	70%
Black Public High School Graduates	*69%*
Black Economically Disadvantaged H.S. Graduates	65%
White Public High School Graduates	*77%*
White Economically Disadvantaged H.S. Graduates	62%

A student's educational environment plays a significant role in the ability to participate and succeed in higher education. Prospective college students from schools that have larger numbers of economically disadvantaged students face greater challenges to participation in higher education than their counterparts in schools with smaller percentages of economically disadvantaged students. This situation may be illustrated by examining the initial higher education participation rates for the Texas high school class of 2005.

Texas had 1,198 public high schools, academies, and centers that graduated students in 2005, for which the Texas Higher Education Coordinating Board reported the graduates' fall 2005 enrollment in Texas higher education institutions. These schools graduated more than 234,000 students and 115,945 of them were found enrolled in a Texas 2-year or 4-year institution of higher education in the fall of 2005.[40]

Economically disadvantaged students make up just over 40 percent of the typical Texas high school's total student population and the median percentage of economically disadvantaged students for these schools is 41 percent. One-half of these Texas high schools have a student population of economically disadvantaged students that ranges from zero to 41 percent, while the remaining one-half of the schools have between 41 percent and 100 percent of their students classified as economically disadvantaged.

[39] Texas Education Agency. Data request for 2005 statewide figures relative to student 'College Entry Indicator Code', by race/ethnicity and economically disadvantaged status. 19 May 2006.
[40] Texas Higher Education Coordinating Board. Texas Higher Education Data. High School to College Linkages. 15 May 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.

The fall enrollment patterns of the graduates from high schools with 41 percent or less of their student bodies characterized as economically disadvantaged, in the fall following graduation, were compared to those of graduates from schools with more than 41 percent of the students so classified. In the fall of 2005, over 54 percent of the graduates from the former group of high schools were found enrolled in a Texas college or university, while 43 percent of the graduates of the group of schools with larger relative numbers of economically disadvantaged students were found enrolled. This difference in the outcomes for students from these two sets of schools is statistically significant.[41]

The classes of 2003 and 2004 reveal the same pattern.

For reasons not totally understood, poorer students in the major urban areas of Texas go on to higher education in even fewer numbers than do economically disadvantaged students in districts in the U.S./Mexico border counties. There are 120 high schools in the major urban districts located in Bexar, Dallas, Harris, Tarrant, and Travis counties. In 2005, almost three quarters of these high schools had student bodies with greater than the state median percentage of economically disadvantaged students. Seventy-three percent of the students in these 87 schools were classified as economically disadvantaged. Of the 21,752 graduates of these schools in 2005, only 36 percent were found enrolled in Texas institutions of higher education in the next fall. The experience of these students, in major urban areas of Texas, is in contrast to those in similar situations in other areas, particularly the major border counties.

There are 91 schools that stretch along the border from El Paso County to Cameron County with more than 41 percent of their students classified as economically disadvantaged. Approximately 52 percent of the academic year 2005 high school graduates from these schools were found enrolled in a Texas institution of higher education in the fall of 2005. Overall, more than 90 percent of the students in these schools are Hispanic. The difference between these postsecondary outcomes for the central urban areas and the border county schools are statistically significant.

One plausible explanation for this difference may be tied to the educational interventions employed by the universities in the more populous border counties. The University of Texas at El Paso, for example, has been engaged in the El Paso Collaborative for Educational Excellence for over a decade, working with the P-12 school districts and the community college in the area to improve educational achievement in the public schools and to increase college enrollment rates. In addition, UTEP employs a number of other outreach programs that involve thousands of schoolchildren in pre-college activities. Similarly, The

[41] The chi-square test indicates, with p-value <0.0001, that the college-going rate of students in schools below the median economically disadvantage percentage is significantly higher than the college-going rate of students in schools above the median economically disadvantage percentage.

University of Texas – Pan American reports working with 17,366 P-12 students in 2003 through a variety of outreach efforts, including TRIO programs and an acclaimed Concurrent Enrollment program. The University of Texas at Brownsville reports serving more than 21,000 P-12 students through a variety of outreach efforts and community collaborations.

Academic preparation is of paramount importance and is historically identified with college participation and success. In 2003, the THECB analyzed the college-going and persistence rates for the Texas high school class of 2000.[42] Students were characterized by the type of curriculum they had completed. The contrast, focused upon in the study, was primarily between the Regular curriculum, with fewer required total credits and more elective credits, and what is now the Recommended High School Program. The lesser curriculum did not require math extending to at least the level of Algebra II, which the Recommended program does.

Approximately 60 percent of the Texas students who graduated in the 2000 academic year completed the Regular curriculum with minimal requirements; 39.8 percent completed the Recommended and greater curricula.

The THECB tracked these students over a two year period, with respect to their enrollment in a Texas public 4-year or 2-year institution. The enrollment rate for those who had completed the more demanding curriculum was 72 percent compared to only 46 percent for those with the lesser credentials. Eighty-two percent of the students with the Recommended or higher diploma, who had enrolled during this period, started in the fall immediately following graduation. A slightly smaller fraction, 72 percent, who completed the lesser curriculum and had enrolled in college during the two year tracking period, had enrolled in that first fall. Table 6 summarizes the first-time enrollment pattern for the class tracked by the THECB for the two academic years following high school graduation.

[42] Texas Higher Education Coordinating Board. Division of Planning and Information Resources. Student Performance and the Recommended High School Program in Accordance with Texas Education Code, Chapter 56, Subchapter M. Austin, Texas. February 2003. http://www.thecb.state.tx.us/reports/PDF/0509.PDF

Table 6. Continuation into Texas Public Higher Education, Texas High School Class of 2000[43]

Diploma Type	High School Graduates 2000	Started Public Higher Education Fall 2000	Started Public Higher Education Spring/Summer 2001	Started Public Higher Education FY 2002
Regular & IEP[44]	128,104	33.4%	6.7%	6.0%
Recommended or Above	84,821	58.6%	7.9%	5.2%
TOTAL	**212,925**	**43.4%**	**7.2%**	**5.7%**

Students completing at least the Recommended curriculum also persisted to a second year of college at greater rates. Whereas 84 percent of the students with a Regular diploma, who had enrolled in a university in the fall of 2000 persisted to 2001, 90 percent of those with a Recommended or greater diploma persisted.

Data used in the THECB analyses also demonstrated a positive association between curriculum level completed and enrollment in higher education, even when race/ethnicity and economic status were taken into account.[45]

Students who had earned the Recommended or greater diploma, whether they were White, Hispanic, or African American and notwithstanding whether or not they were economically disadvantaged, were consistently found enrolled in Texas colleges and universities at higher rates than their counterparts who had completed the lesser curriculum requirements. More Hispanic and African American students, regardless of economic status, who had only completed the minimal curricula were not found to have enrolled in Texas institutions. More Hispanic and African American students who had completed the Recommended curriculum were found to have enrolled in higher education.

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[43] Texas Higher Education Coordinating Board. Division of Planning and Information Resources. Student Performance and the Recommended High School Program in Accordance with Texas Education Code, Chapter 56, Subchapter M. Austin, Texas. February 2003. http://www.thecb.state.tx.us/reports/PDF/0509.PDF

[44] An Individualized Education Program (IEP) is a program of individualized instruction for a child with disabilities established by a committee of persons required under 20 U.S.C. Section 1401(11).

[45] To ascertain this, the THECB data on the class of 2000's continuation to public higher education, through the first year following high school graduation, were disaggregated to account for race/ethnicity and for status as economically disadvantaged or not. Continuation to college by these students was then examined by race/ethnicity, by economic status, and by the type of diploma the students had earned.

For White students who completed only the minimum curriculum, roughly one-half of those not economically disadvantaged were enrolled in higher education. The majority of the economically disadvantaged White students who completed the lesser course of study, were not found in higher education.

As indicated earlier, the Recommended curriculum is now the default or required curriculum for Texas high school students. Students who have taken the Recommended curriculum may be more prone to enroll in college than their counterparts who do not complete such a course of study, but completion of the Recommended curriculum alone is not a guarantee that students will continue their studies after high school.

CHALLENGES TO SUCCESS IN HIGHER EDUCATION AND CHARACTERISTICS OF STUDENTS AT RISK

America's Students

Various works over the years have examined the challenges and barriers to attaining a degree for students once they are enrolled in a postsecondary institution. One of the most significant challenges is adequate academic preparation while in high school. This matter and other significant factors have been explored in some detail by the U.S. Department of Education, most recently in a report released in February 2006.

The Toolbox Revisited: Paths to Degree Completion From High School Through College[46] analyzes educational outcomes for a nationally representative class of students who were 8th graders in 1988 and who were scheduled to graduate from high school in 1992. Their postsecondary education was tracked through 2000. The study builds upon a similar work conducted by the Department that tracked educational outcomes for students who graduated in 1982.

The objective of the study was to examine factors that contribute to success in obtaining a bachelor's degree. The students in the class of 1992 whose academic progress was tracked had graduated from high school and enrolled in a bachelor's degree-granting institution at some time by 2000, and were those for whom there were complete academic records.

The basic question the study addresses is: what demographic, high school performance, postsecondary entry, and postsecondary history (e.g., attendance patterns, academic performance) factors are convincingly associated with

[46] Adelman, Clifford. The Toolbox Revisited: Paths to Degree Completion From High School Through College. U.S. Department of Education. Washington, D.C.: 2006. 2 February 2006. http://www.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf.

bachelor's degree attainment for 12th-graders who subsequently attended a four-year college at any time in their undergraduate careers.

The Toolbox Revisited follows these students over the course of the 8½ years as they may delay, or not, their initial enrollment in college; participate either as full or part-time students; migrate from one institution to another; and stop out of college at times, or accelerate their educational progress (through credits earned prior to high school graduation or summer school while 'in college'). These metrics are more comprehensive and somewhat different from the traditional accounting of higher educational progress which often focuses on traditional students' progress at the first institution in which they were enrolled.

Five critical variables are identified and examined that correlate, positively and strongly, with the eventual attainment of bachelor's degrees for the type of students who were studied. These variables relate as much to 'academic momentum' as to pure academic performance.

They are:

- The academic intensity of the high school curriculum that students complete[47]
- The time lag between high school graduation and college enrollment (the benchmark for the study is whether or not the student entered college within 7 months of high school graduation)
- The number of credits completed in the first calendar year of college attendance
- The number of college credits completed in summer school
- The percentage of (college) grades attributable to withdrawals or no-credit repeats

[47] The academic intensity variable takes a weighted distribution of students from the Education Longitudinal Study, NELS: 88/2000 across 31 levels of academic curriculum intensity and divides the distribution by quintiles. Each level of academic curriculum intensity is a distinct configuration of numbers of Carnegie units earned in core academic areas and other distinct notations about students' course of study. Whereas, for example, the highest intensity level has a *minimum* number of units for English of 3.75 units, for Math of 3.75 units, for lab sciences no fewer than 2 units *plus* additional units in Computer Science, along with more than one AP unit, and so on --- there are no minimum number of units for the 31st level of intensity. The *average* number of units expected of students in the *highest quintile* of intensity is: 4.27 in English; 4.10 in Math; 3.2 in core lab science; 3.09 in foreign languages; 3.70 in History and Social Studies; .74 in Computer Science. The *average* number of units expected of students in the *lowest quintile* is: 3.43 in English; 1.81 in Math; .94 in core lab science; .62 in foreign languages; 2.82 in History and Social Studies; .28 in Computer Science. A student who graduated with a curriculum in the "top 40%" of the high school curricula examined in The Toolbox Revisited would include one whose curriculum fit within the profile of the two highest quintiles. The top 40% of the curricula proved to be a key benchmark for the study.

Among students who attended a four-year college, student and family demographics proved to have only indirect connections with degree completion. The key demographic elements that were examined were: race/ethnicity, gender, family income and first-generation status. The study indicates that at the moment high school academic history is included in the multivariate account, demography plays a considerably reduced role in the degree outcome.

Of the five key variables discussed in the study, the rigor of the high school curriculum appears to contribute more to the ultimate attainment of a bachelor's degree than the other variables. This relationship holds true regardless of race/ethnicity, and adds considerably to the degree prospects of Latino students.[48] The key element contributing to the rigor of the curriculum is judged to be the level of mathematics a student completes while in high school.

The curricula completed by the students who were included in the study were sorted into five categories, or quintiles, based on the cumulative intensity of the core courses. As previously mentioned, a significant component of the different quintiles of curricula intensity is the level of math completed in each. The study concludes that students who complete a curriculum approaching that of the top two quintiles (the top 40 percent) in intensity stand a significantly greater chance of completing a degree—if they did in fact go on to enroll in a 4-year institution at some time.

Table 7 illustrates the importance of the mathematics component in a student's high school curriculum as it pertains to success in college.

Table 7. Bachelor's Degree Attainment Rate by Highest Level of Mathematics Reached in High School by 1982 and 1992 12th-Graders [49]

	Class of 1982		Class of 1992	
Level Of Math	**Percentage Reaching This Level Of Math**	**Earned Bachelor's**	**Percentage Reaching This Level Of Math**	**Earned Bachelor's**
Calculus	5.2 %	82.1%	9.7 %	83.3 %
Precalculus	4.8	75.9	10.8	74.6
Trigonometry	9.3	64.7	12.1	60.0
Algebra 2	24.6	46.4	30.0	39.3
Geometry	16.3	31.0	14.2	16.7
Algebra 1	21.8	13.4	16.5	7.0
Pre-algebra	18.0	5.4	6.7	3.9

Completing a rigorous curriculum in high school is not only a prerequisite for success in college, it is also necessary for success in today's typical workplace.

[48] The five terms used in the Toolbox Revisited to distinguish race/ethnicity are: White, African-American, Latino, Asian, and American Indian.
[49] Adelman. Table 5, page 31.

The math and reading skills needed to be ready for success in workforce training programs are comparable to those needed for success in the first year of college.[50]

In addition to preparation, there are other risks to success that students may better prepare for with the proper guidance. Other longitudinal data regarding student success in higher education, derived from a cohort of students who began their higher education in the 1995-96 academic year, illustrate these factors.[51] The progress of these students' postsecondary career has been tracked and reported through the 2000-01 academic year. This report also differs from some of the more typical reports of student progress that are from an institutional perspective and measure student outcomes at the institution the student first attended. This report focuses on the enrollment, persistence and completion rates of students anywhere in higher education.

Over the six years of the study, 40 percent of the students were enrolled in at least one other institution than the one in which they first enrolled. Approximately one-third of the students transferred from their first institution to a different one and 11 percent were at times co-enrolled in more than one institution.

The work of the NCES identifies a number of factors that affect students' postsecondary outcomes. Good academic preparation in high school, clear postsecondary goals, and the types of institutions attended in addition to various family characteristics are examined in connection with persistence outcomes. Some of the same factors that might influence a student's ability or inclination to enroll in higher education in the first instance, such as first-generation status and family income, are also present in the characteristics of those who do enroll but do not persist.

Having clearly defined goals is an important ingredient to success in higher education. Of the students in the 1995-96 cohort who were surveyed, 11.6 percent reported that they had no specific degree goal. Six years later, of those who had reported no degree goal, 56 percent had indeed not obtained a postsecondary credential and were no longer enrolled in higher education. Others of their cohort with goals for a degree reported different and more promising results. Moreover, beginning students without a degree or certificate goal were most likely to leave without a degree in the first year of their enrollment.[52] Such a consequence highlights the premium on students' goal-setting before arriving on campus.

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[50] ACT, Inc. College and Workforce Training Readiness. Ready for College and Ready for Work: Same or Different? 2006. 2 July 2006. http://www.act.org/path/policy/pdf/ReadinessBrief.pdf.
[51] U.S. Department of Education. National Center for Education Statistics. Descriptive Summary of 1995–96 Beginning Postsecondary Students: Six Years Later. NCES 2003–151. by Berkner, He, and Cataldi. Washington, DC: 2002. http://nces.ed.gov/pubs2003/2003151.pdf.
[52] U.S. Department of Education. National Center for Education Statistics. Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later. Page 115.

Table 8 illustrates the degree outcomes for these students by degree goal, race/ethnicity, parental education, and family income.

Table 8. Six Year Persistence Summary, 1995-96 Beginning Postsecondary Students, Highest Degree Attained Anywhere as of June 2001[53]

	Attained Any Degree Or Certificate	No Degree Still Enrolled	No Degree Not Enrolled
Degree Goal			
No Degree Goal	27.6%	16.1%	56.3%
Associates' Degree	40.6%	15.6%	43.9%
Bachelor's Degree	60.9%	16.1%	23.0%
Race/Ethnicity			
White, non-Hispanic	53.0%	14.0%	33.0%
Black, non-Hispanic	40.2%	14.5%	45.3%
Hispanic	44.7%	16.4%	38.9%
Parental Education			
HS Diploma or Less	44.9%	12.4%	42.8%
Some College	42.5%	17.8%	39.6%
Bachelor's Degree	60.0%	15.2%	24.8%
Advanced Degree	68.3%	14.9%	16.9%
Family Income (1994)			
Less than $25,000	50.2%	15.2%	34.7%
$25,000 - $44,999	51.7%	17.2%	31.1%
$45,000 - $69,999	56.0%	15.5%	28.6%
$70,000 or greater	65.2%	14.4%	20.4%
All Students	50.8%	14.4%	34.8%

Note: Row details may not add to 100% due to rounding.

The assessment of the 1995-96 students also noted different persistence and attainment outcomes by the type of first postsecondary institution that the student attended and by several risk factors. Students who began their college work at a 2-year institution attained degrees or certifications at lower rates than those who began at 4-year institutions. The report found similar results for those who exhibited one or more of the following persistence risk factors:[54]

- Delaying entry into postsecondary education
- Part-time enrollment
- Not having a regular high school diploma (e.g., at the end of six years, 32 percent of the students entering with a diploma had earned a bachelor's

[53] U.S. Department of Education. National Center for Education Statistics. Descriptive Summary of 1995–96 Beginning Postsecondary Students: Six Years Later. Pages 12 and 57.
[54] U.S. Department of Education. National Center for Education Statistics. Descriptive Summary of 1995–96 Beginning Postsecondary Students: Six Years Later. Page 58.

degree while only 4 percent of those with a GED or equivalent had done so)
- Having children when first enrolled
- Being a single parent
- Lacking parental financial support
- Working full time while enrolled

Of the students who had none of these risk factors, more than 80 percent had either attained a degree or certificate or were still enrolled in a postsecondary institution at the end of the six year period. With one of these risk factors, this attainment/persistence rate fell to 63 percent; with two or more, the attainment/persistence rate was less than 53 percent.

This same report illustrated the importance of continuity of enrollment, particularly through the first two years of college. Of the beginning students who left postsecondary education without a degree, more than half (51 percent) left in the first two years; 35 percent left after the freshman year.[55]

The study also noted the differences in bachelor's degree attainment between those who began their postsecondary work at a 2-year institution as opposed to a 4-year school. Over the time period that was examined, only 23 percent of those with a bachelor's degree goal who began their work at a public 2-year institution had obtained such a degree, while 63 percent of those with similar goals who began their work at a 4-year institution had earned a bachelor's degree.

Another review of the 1995-96 beginning postsecondary student data focused on the implications for college persistence and success on the part of students who delay their entry to higher education.[56] Among those enrolling in college for the first time in 1995-96, approximately one-third had waited a year or more after high school graduation to enroll. Students who did not delay entry into college ultimately attained degrees at significantly greater rates than those who did delay. 57.5 percent of the students who did not delay entry attained a degree of some kind; 41.9 percent obtained a bachelor's degree. Of those who delayed entry, only 40 percent obtained some kind of a degree and only 8.6 percent obtained a bachelor's degree.

Students who were less well prepared and faced other risk factors characterized those who delayed entry. The study also notes that educational expectations tended to decline with the length of delay and students were less likely to enroll

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[55] U.S. Department of Education. National Center for Education Statistics. Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later. Table 5.0-A. Page 121. http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2003151.

[56] U.S. Department of Education. National Center for Education Statistics. Waiting to Attend College: Undergraduates Who Delay Their Postsecondary Enrollment (NCES 2005–152). by Horn, Cataldi, and Sikora. Washington, DC: 2005. http://nces.ed.gov/pubs2005/2005152.pdf.

in bachelor's degree programs. Clearly, academic momentum is closely associated with the success of college students.

Texas' Students

The most recently published longitudinal study of Texas students' progress through higher education was developed by the THECB to track a cohort of Texas students who were in the 7th grade in 1992 through college at Texas' public institutions of higher education.[57] This report tracked students through 2003 and reveals similar trends to those identified in the national data.

The data reveal that 60 percent of the White graduates of Texas high schools were found enrolled in Texas' public higher education at some time from 1996-98 through 2003, while Hispanic and Black students who had graduated from a Texas high school were found enrolled at rates approximating 48 percent and 47 percent, respectively. Of all those from the original 7th grade cohort (who may have graduated high school anywhere) who were found enrolled in higher education, 41 percent of the White students had obtained a degree or certificate by 2003. Hispanic and Black students obtained a degree or certificate of some kind at rates approximating 25 percent and 23 percent, respectively.

The relationships among these groups, in terms of earning a degree or certificate, resemble those of the national sample of students discussed above, although the disparities between White students' degree attainment and that of Hispanic and Black students are greater for the Texas cohort.

Similar work examining graduation outcomes for Texas students was conducted in 1998 by the THECB and one of its interim task forces, a Task Force on Retention and Graduation.[58] This study examined outcomes from several perspectives including the racial/ethnic and economic characteristics of the students and the type of academic preparation the students obtained in high school. It covers students first enrolling in Texas' public 2-year and 4-year schools in the fall of 1991 and tracked them through the 1996-97 academic year.

The Task Force found disparities similar to those reported in the 2004 study. Degree attainment by Hispanic and Black students lagged that of White students. However, it also found that a significantly greater fraction of the Hispanic and Black students were economically disadvantaged and were from school districts

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[57] Texas Higher Education Coordinating Board. The 1992 Cohort of Texas Public Seventh-Grade Students Followed Through Higher Education by Race-Ethnicity and Gender. Austin, Texas. July 27, 2004 Revised. http://www.thecb.state.tx.us/Reports/PDF/0918.PDF.
Note: The fact that it is the most recent study of its kind was confirmed by discussion with Dr. David Gardner, THECB, June 14, 2006. The THECB does maintain and publish graduation data and rates for the various types of institutions that report to the Board.

[58] Texas Higher Education Coordinating Board. Report of the Task Force on Retention and Graduation. Austin, Texas. April 15, 1998.

with more students who were also economically disadvantaged. This factor put these students at a greater risk than White students of not completing a degree.

Just as was demonstrated earlier with respect to participation in higher education by students from schools that have extraordinary numbers of economically disadvantaged students, pupils from those schools who do enroll in higher education also have greater challenges to ultimately succeed in college. The 1998 Task Force found that a much lower fraction of the students from Texas school districts with 40 percent or more economically disadvantaged students who entered a Texas public institution of higher education ultimately attained a bachelor's degree than did those from districts with relatively fewer economically disadvantaged students.

This earlier study also examined differences in degree attainment based on differences in the types of diplomas the high school graduates had earned. Only 19 percent of the students who entered a Texas college with a Regular diploma (i.e., the minimum required for graduation at the time) earned a bachelor's degree during the six year period. Almost 45 percent of the students with better credentials earned a bachelor's degree during the same time period.

During the course of the current Study of P-16 Interventions, the degree and persistence outcomes for the Texas high school class of 1999 were examined in the context of the evaluation of the intervention programs. Public high school graduates, who enrolled in Texas public 2-year and 4-year institutions of higher education in the academic year immediately following high school graduation, were tracked for six years, through the 2004-05 academic year. This snapshot captured students who may have migrated between and among other public as well as, beginning with the 2002 academic year, Texas private institutions of higher education.

Table 9 illustrates a summary of the degree and persistence outcomes for these students. The table identifies those who earned a 2-year degree, a certificate, or a bachelor's degree or higher, or those who had not but were still enrolled in higher education. These data demonstrate the same disparities among economic and racial/ethnic groups, for these measures of higher education success that are apparent for participation indicators.

Table 9. Percent of Texas High School Graduates First Found Enrolled in a Texas Public Higher Education Institution in the 1999-2000 Academic Year Who Had Earned Any Degree or Certificate or Who Were Still Enrolled in Texas Higher Education in the Sixth Year (2004-05) Following High School.[59]

	H S Class of 1999
Group	**Percent With a Degree or Certificate or Still Enrolled in 2004-05**
All Public High School Graduates	59.4%
All Economically Disadvantaged H.S. Graduates	48.5%
All Non Economically Disadvantaged H.S. Graduates	61.9%
Hispanic Public High School Graduates	53.1%
Hispanic Economically Disadvantaged H.S. Graduates	49.1%
Black Public High School Graduates	49.0%
Black Economically Disadvantaged H.S. Graduates	42.4%
White Public High School Graduates	62.9%
White Economically Disadvantaged H.S. Graduates	46.8%

[59]Data derived from the database developed for this Study from Texas Education Agency and Texas Higher Education Coordinating Board files. Data represent students with valid SSNs

INTERVENTION TO PROMOTE GREATER PARTICIPATION AND SUCCESS

The previous chapter discussed characteristics of students who face the greatest challenges to obtaining a higher education. It is a premise of this Study that these challenges can be met effectively. To enable more young Texans, particularly potential first-generation, economically disadvantaged, and Hispanic and African American students, to participate and succeed in higher education will require focused efforts that address the four key steps in the college-going process that every student must negotiate.[60]

GOALS

Educational aspirations and expectations comprise the first step. They are important for preparation for college, to navigating the college-going process, and for persistence to a degree. As discussed earlier, Texas has an extraordinary number of school children who are economically disadvantaged and/or potential first-generation college students. Such students too frequently lack critical information about the importance of and the possibilities for postsecondary education and about how to negotiate the college preparation and enrollment process. The data illustrate the lower educational expectations of these students.

Much of the disparity in educational expectations between these students and those with parents who have experience with higher education or who have other resources can be remedied. If students have counselors or advisors who believe that the student should attend a 4-year college, the odds of a student choosing that path are increased by an extraordinary factor. This is true for low-income students as well as students generally.[61] This influence can come from a variety of mentors including, particularly, teachers and others who may come in contact with the students at critical times.

More of these students must be encouraged to aspire to a higher education and to prepare accordingly. Information about career opportunities, the educational qualifications for various career paths, opportunities to attain postsecondary credentials, and knowledge about how to pursue them is critical to the motivation of these students.

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[60] See Appendix A which contains several references to evaluations and studies of effective intervention practices.

[61] King, Jacqueline E. Improving the Odds: Factors that Increase the Likelihood of Four-Year College Attendance Among High School Seniors. New York: College Entrance Examination Board, 1996.

Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs Literature Review. Appendix A.

PREPARATION

The next important step to greater educational attainment involves preparing, academically and otherwise, for postsecondary education. For a student who resolves to go to college and undertakes to properly prepare for it, a strong academic record in high school can be the great equalizer.

Research on several fronts has concluded that completing a rigorous course of work in high school, including advanced work in mathematics, helps close the gaps that correspond to race/ethnicity, family education background, and family income. The U.S. Department of Education study, The Toolbox Revisited, offers a hypothetical look at degree attainment based on several key variables. Table 10 illustrates the *potential* bachelor's degree completion rates for students who actually enroll in a 4-year college and meet the thresholds of several of those cumulative conditions. The outlook for all students brightens as each condition is added to the formula.

The greatest changes in attainment rates are attributable to the rigor of the high school curriculum completed by the student. Rigorous high school courses, coupled with preparations to enter school sooner rather than later after graduation can significantly improve the odds of college success—for all groups of students.[62]

[62] Adelman, Table 34, Page 95. Although Table 10, following, examines only the changes in the gaps by race/ethnicity, similar analyses illustrated in Table 34 demonstrate that rigorous course taking yields a positive change in college attainment rates for each different socioeconomic category as well. Socioeconomic status, as constructed for the Adelman study, includes, among other variables, family income and the parents' highest level of education.

Table 10. Hypothetical Cumulative Consequences of Variables Critical to Bachelor's Degree Completion for 1992 12th-Graders Who Earned a Standard High School Diploma by December 1996, Attended a Four-Year College at Any Time, and Whose Postsecondary Records Were Complete, by Race/Ethnicity[63]

Cumulative Conditions	Percentage Earning Bachelor's Degree				
	White	African American	Latino	Asian	All
1) Baseline, for students enrolled in a 4-year college	67.6%	52.1%	45.4%	67.9%	64.6%
2) No Delay of Entry to College	71.0%	54.6%	50.5%	68.2%	67.9%
3) No Delay plus top 40 percent of H S curriculum, and highest high school mathematics above Algebra 2	85.6%	65.9%	69.2%	91.5%	84.1%
4) No delay, top 40 percent of high school curriculum, and more than four credits in summer terms	90.6%	84.6%	69.2%	92.6%	89.1%
5) No delay, top 40 percent of high school curriculum, more than four credits in summer terms, and 20 or more credits in first calendar year of attendance	92.6%	88.2%	71.9%	93.9%	91.4%
6) No delay, top 40 percent of high school curriculum, more than four credits in summer terms, 20 or more credits in first calendar year, and less than 10 percent of grades were withdrawals or no-credit repeats	95.5%	94.3%	79.4%	95.3%	94.6%

How does the intensity of the five levels of curricula used in the U.S. Department of Education analyses compare with requirements for students in Texas high schools?

[63] Adelman, Table 32, page 92.

Characteristics of the top two quintiles of curricular intensity compiled for that study are illustrated in Table 11. Also included in the table are the components of the State of Texas' statutory Recommended High School Program for 2006. The Recommended curriculum is the required curriculum in Texas beginning with the students enrolled in the 9th grade in 2004-05 (the Class of 2008), with exceptions for special circumstances.

Table 11. Comparison of Texas Recommended High School Program[64] and Selected Levels of Curriculum Intensity Identified in The Toolbox Revisited Study

High School Academic Curriculum Fields	Texas Recommended High School Program (minimum units)	*The Toolbox Revisited* [65]	
		Mean Units in 2nd Highest Quintile	Mean Units in Highest Quintile
Mathematics	3.0[66]	3.81[67]	4.10[68]
English	4.5[69]	4.17	4.27
Science	4.0[70]	3.27[71]	3.94[72]
Social Studies	4.0[73]	3.62	3.70
Foreign Language	2.0	2.23	3.09
Subtotal	17.5	17.1	19.1
Other courses	6.5	N/A	N/A
TOTAL	**24.0**	**N/A**	**N/A**

Table 11 shows the core elements of Texas' Recommended course of study which closely approximate the averages reported in the top two quintiles of academic intensity as computed by The Toolbox Revisited. Texas students who complete the minimums of the Recommended curriculum but who would add another math course beyond Algebra II would compile a transcript that, on paper, appears to match the intensity of the top 40 percent of curricula examined in the study. If students completing such a program of work went on to enroll in a 4-year institution of higher education and maintained the momentum suggested by

[64] Chapter 74. Curriculum Requirements. Subchapter D. Graduation Requirements Beginning with School Year 2004-2005. §74.53 Recommended High School Program. 28 TexReg 10936. December 7, 2003. http://www.tea.state.tx.us/rules/tac/chapter074/ch074e.html.
[65] The study focused on 'core academic fields' of the curriculum.
[66] Algebra I, Algebra II, Geometry
[67] 65% of students in the *Toolbox Revisited* study with curricula in this quintile had studied math above Algebra II
[68] 96% of students in the *Toolbox Revisited* study with curricula in this quintile had studied math above Algebra II
[69] Includes .5 units of Speech
[70] Includes, in this enumeration, 1 credit of Technology Applications (e.g., computer science, etc.). Technology Applications is illustrated here because similar credits are identified in the *Toolbox Revisited* report. House Bill 1, adopted in 2006, (Tex. H.B.1, 79th Leg., 3rd C.S. (2006) will require 4 credits of science.
[71] Includes .56 credits in Computer Science
[72] Includes .74 credits in Computer Science
[73] Includes .5 credits of Economics

the other variables examined in the study, The Toolbox Revisited findings suggest that they would stand an excellent chance of earning a degree.

Achieve, Inc., in its recent review of high school graduation requirements, recognized Texas as one of eight states that has made such a college-preparatory program the default curriculum.[74]

The 3rd Called Session of the 79th Texas Legislature adopted additional requirements for the Recommended curriculum that will become effective for students entering the ninth grade beginning with the 2007-08 school year. The Recommended and advanced curriculum that will then be effective call for four courses each in English language arts, mathematics, science, and social studies along with one or more courses that include a research writing component.[75] Such a required curriculum would appear to address the gap in mathematics between the current Texas curriculum and that identified in the highest quintiles of those examined in The Toolbox Revisited.

While Texas has strengthened academic requirements, there must also be a concerted effort to assure that the courses students complete actually meet the needed level of college preparatory coursework and that students then take advantage of this stronger preparation and go on to college. Other requirements of Texas' recently enacted legislation (H.B.1) appear to address some of these issues associated with the content and delivery of the curricula.

ENROLLMENT

The third key step in the process of attaining greater college participation and success is actually enrolling in college in a timely manner.

Several studies illustrate that a key element of college success (i.e., attaining at least a bachelor's degree) involves maintaining academic momentum. This is accomplished by enrolling in college sooner rather than later, accumulating a significant number of credits in the first year, persisting to the sophomore year and making use of summer college opportunities. This involves the student having clear goals, having decided which postsecondary school he/she intends to attend, having prepared for and taken the necessary entrance exams, having examined the opportunities and applied for financial assistance, and having applied and arranged for admission. If housing, transportation or other needs go with a particular college choice, the student should also anticipate these---well before graduation from high school.

In many cases, maintaining academic momentum by not delaying entry to college may be a matter as simple as a timely intervention to assist students with

[74] Achieve, Inc. Closing The Expectations Gap 2006. Washington D.C.: February 2006. 3 March 2006. http://www.achieve.org/dstore.nsf/Lookup/50-statepub-06/$file/50-statepub-06.pdf
[75] Tex. H.B.1, 79th Leg., 3rd C.S. (2006).

the mechanics of completing and submitting applications, identifying financial assistance, and completing the other administrative requirements associated with going to college. A recently completed evaluation of Talent Search programs financed by the U.S. Department of Education concluded that participants in Talent Search programs were more likely than non-participants from similar backgrounds to be first-time applicants for financial aid and were more likely to have enrolled in a 2-year or 4-year institution of higher education than non-participants. Talent Search programs are comprehensive outreach programs that include a focus on services such as college orientation and assistance with financial aid and college admissions applications, as well as others. The report states: "Practical information – direct guidance on how to complete applications for financial aid and admission to college and what a college campus looks and feels like – may have been one of the key services that Talent Search projects delivered."[76]

As important as timely entry into higher education is, members of those Texas groups least represented in higher education who do go to college appear to delay their entry more than their counterparts, putting them at greater risk of not attaining a degree. Of the 2003 Texas high school graduates who were economically disadvantaged and who were found enrolled in a Texas college or university within the first two years following graduation, 76 percent had enrolled in the fall immediately following graduation. More of the college-going, non-economically disadvantaged Texas students (84 percent) had enrolled in the first fall following graduation. Similar patterns of delayed entry may be observed for Hispanic and Black high school graduates compared to White students.[77]

As Texas' high schools and their students have anticipated the universal requirement of at least the Recommended curriculum, the percentage of high school graduates graduating with the Recommended diploma has been steadily increasing. Table 12 illustrates this trend, but also suggests that greater numbers completing this curriculum do not automatically result in significantly higher college entrance examination scores or college-going rates.

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[76] U.S. Department of Education. Office of Planning, Evaluation and Policy Development. Policy and Program Studies Service. A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report from Phase II of the National Evaluation. Washington, D.C., 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch-outcomes/ts-report.pdf

[77] Data derived from the database developed for the P-16 Study from Texas Education Agency and Texas Higher Education Coordinating Board files. Please see data contained in the Enrollment Outcomes Table in Appendix D.

Table 12. Selected Characteristics of Texas' High School Graduating Classes 2002 Through 2006[78]

	Class of 2002	Class of 2003	Class of 2004	Class of 2005	Class of 2006
Percent of Class Graduating with at least the Recommended Diploma	*58.2%*	*63.7%*	*68.4%*	*72.3%*	*75.7%*
Percent of Class Taking the SAT/ACT Exams	61.9%	62.4%	61.9%	65.5%	N/A
Percent of SAT/ACT Test Takers Scoring At or Above the Criterion Score	26.6%	27.2%	27.0%	27.4%	N/A
Percent of Class Found Enrolled in Texas Higher Education Institutions in Fall Following Graduation	*48.5%*	*48.5%*	*48.6%*	*49.8%*	*50.4%*

NOTE: The rate at which the proportion of graduates with *at least* the Recommended diploma has grown during the 2002-2006 period is 30 percent (.757/.582)-1; the rate at which the percent of the respective classes have been found enrolled in Texas higher education has grown by only 3.9 percent (.504/.485)-1 during the same period.

The good news is that graduation requirements of Texas high schools are being strengthened and more and more students appear to be undertaking more rigorous courses of study. The rest of the story, though, is that there remains work to assure that students are actually learning more and then being assisted in putting this preparation to use in pursuit of a higher education.

Completion of a college-preparatory high school curriculum is a necessary ingredient to postsecondary success; alone, however, it does not appear sufficient to assure proportionately greater participation in higher education.

PERSISTENCE TO DEGREE

Once a student has enrolled in college, it is critical to maintain academic momentum. Persistence through the first two years of college is important. As the literature indicates, most of the students who leave college without a degree do so in the first two years. The vast majority of those who leave in the first two years do not survive the transition from the freshman to the sophomore year.

Students from underrepresented groups are especially vulnerable. Only 74 percent of the members of the Texas high school class of 2003 who were

[78] Texas Education Agency. Academic Excellence Indicator System Statewide Reports 2003-04, 2004-05. http://www.tea.state.tx.us/perfreport/aeis/. and 2004-2005, 2005-2006 Student Graduate Reports. http://www.tea.state.tx.us/adhocrpt.
Texas Higher Education Coordinating Board. High School Graduates Enrolled in Higher Education the Following Fall: State Summary by Ethnicity and Higher Education Sector, Fall 2000 to Fall 2006 . 30 May 2007. The THECB reports all high school graduates regardless of student identifier.

economically disadvantaged and who were found enrolled in a Texas college in the first year following their graduation persisted to the 2004-05 academic year. At the same time, 83 percent of those who were not classified as economically disadvantaged persisted.[79]

Students from underrepresented groups who enroll in a public 2-year or 4-year institution in Texas also do not obtain degrees at rates even approaching those of traditional students. Of the economically disadvantaged students from the Class of 1999 who enrolled in a college or university in the year following high school, only 27 percent had obtained a degree or certificate within the six-year period observed. Non-economically disadvantaged students earned degrees or certificates at the rate of 42.7 percent.

Intervention programs can assist students anticipate challenges to success. Students must be apprised of the risks of not properly preparing while in high school, thereby minimizing the number of remedial college courses they may have to take and the number of courses they may have to retake for credit. Proper assistance with college scholarships, grants, loans and other forms of financial aid can also minimize the necessity of working more than part-time while in school and maximize the number of courses that can be taken each semester. Taking AP or dual credit courses while in high school can save students money and shorten the time-to-degree once in college.

Collaborative intervention efforts that involve the colleges and P-12 schools can also facilitate tracking students and engaging them in retention programs provided by higher education institutions.

Determination, coupled with the proper preparation and planning for success, can help to 'close the gaps' in Texas higher educational attainment.

[79] Data derived from the database developed for the P-16 Study from Texas Education Agency and Texas Higher Education Coordinating Board files. Please see data for 2003 Reference Groups contained in the Enrollment Outcomes Table in Appendix D.

INTERVENTION PROGRAMS IN TEXAS

In 2004, the Institute for Demographic and Socioeconomic Research at the University of Texas at San Antonio surveyed Texas' public community colleges and universities to examine student-centered intervention programs currently being operated by Texas' institutions of higher education. The survey aimed to identify and catalogue these programs in order to increase awareness of these efforts. Eighty-five Texas public universities and community colleges were invited to participate in the survey; fifty-one of these institutions submitted program data in response to the questionnaire. Another four institutions reported that there were no programs in operation that were the subject of the Study.

The survey also produced a set of data for more in-depth study, to enable greater understanding of how these programs may be utilized to close the gaps in participation and success among different groups of students.

THE SURVEY OF TEXAS PUBLIC UNIVERSITIES AND COMMUNITY COLLEGES[80]

The survey was conducted through the auspices of the Texas Higher Education Coordinating Board. Beginning in August 2004, each Texas public community college and university was asked to participate. Thirty-one universities and twenty community colleges submitted program information through the electronic survey. The data requested were for fiscal year 2003. This period was selected to provide a better opportunity to capture relatively recent information about the participants' college-going behavior in the two academic years (through 2004-05) following their graduation from high school.

[80] The survey resulted in a report that includes two tables with information about the programs. Table 1 illustrates the number of programs reported for each institution, the grade levels and numbers of the P-12 program participants for all such programs, and the total expenditures for the programs. Table 2 provides for a detailed review of the questionnaire responses for each program submitted through the survey. Data included in these summary tables represent information submitted by the program administrators and, except for the sample programs discussed later in this chapter, have not been independently verified. These tables and a sample of the survey instrument, may be reviewed at the following site, which is a Report Center site maintained by the THECB --- http://www.thecb.state.tx.us/stealth/P16Survey/reports/index.cfm.

General Characteristics of the Programs Included in the Study

Fifty-one institutions reported 232 P-16 student-centered intervention programs in operation in 2003 that appear to meet the definition of student-centered programs included in the Study.

More than 319,000 students were reported served by these programs. The vast majority of these programs targeted high school students; only 38 percent served students in middle-schools and even fewer included elementary students among their target groups. Accordingly, most of the students, 76 percent, were in high school, 13 percent were in grades 6 through 8, and 11 percent were in grades P through 5.

Respondents were asked to identify characteristics of their primary target groups. Fifty-five percent said Hispanic or Black students constituted a primary focus. More than two-thirds indicated that economically disadvantaged students were also targeted. First-generation students were primary targets for 60 percent of the programs, while students from a high school with a demonstrably low college-going rate for its graduates constituted a particular group of interest for 28 percent of the programs. Many programs served students in several or all of these categories. Several programs also responded that other student-types were also eligible for services.

Services

Based on a review of the literature on these types of programs, ten categories of services typical to these programs were identified.[81] Services defined in the survey are illustrated below. Administrators were asked to denote those services that were provided specifically by the particular intervention program and to resist denoting those services that might have been provided peripherally by the college/university with which the program was affiliated. The ten service categories are as follows:

- Early information about preparing for college
- Family involvement (e.g., parents or responsible adults sign program participation agreements for their children, participate in parent meetings/workshops, and/or assist with special events sponsored by the program, etc.)

[81] The institutions were asked to indicate the services provided to their participants through each program. As well, respondents were provided an option to identify additional services that might not fit within one of the categories. Very few responses indicated a student-centered service not accounted for in one of the categories provided. Of the 232 programs surveyed, only three listed additional service elements.

- Academic counseling/advising to assist students in identifying educational goals and to provide curriculum planning, college information, career planning, etc.

- Tutoring/mentoring activities (e.g., currently enrolled college students, peers, corporate mentor-sponsors, or others who provide tutoring, encouragement, field trips, counseling, etc.)

- Development of study and/or specific academic skills (e.g., supplemental courses to strengthen particular skills in areas such as reading, writing, the sciences or mathematics, special seminars, workshops, etc.)

- Provision of P-12 school-to-college transition activities (e.g., summer camps on a college campus to simulate college life, visits to college campuses, or other activities that provide a sample of college life.)

- Assistance with college admission applications, financial aid applications or eligibility/placement test preparations

- Participation in cultural/social/co-curricular activities (e.g., strategies to promote student leadership and social skills, awareness of cultural history, literature and other assets, utilization of social support from peers, college students, or leaders from the community, and engagement in field trips to cultural events, etc.)

- Dual or concurrent enrollment/dual credit (high school/college) academic courses provided by the program

- Financial aid to attend college (e.g., scholarships, grants, student loans, etc.) provided by the program

Approximately one-half of the programs provided six or fewer of the services identified. Twenty-five percent of the programs provided services in at least nine categories. Table 13 illustrates the frequency with which each service category was used.

Table 13. Services Utilized by Programs Identified in Fall 2004 Survey

Service Element	Number of Programs	*Element Frequency**
Early Information about Preparing for College	200	86%
Family Involvement	159	69%
Academic Counseling/Advising	174	75%
Tutoring/Mentoring Activities	157	68%
Development of Study and/or Specific Academic Skills	141	61%
High School-to-College Transition Activities	122	53%
Assistance with College Admissions, Financial Aid Applications, or Placement Tests	159	69%
Participation in Cultural/Social/Co-curricular Educational Activities or Events	147	63%
Encouragement and/or Provision of Dual Enrollment/Dual Credit Courses	97	42%
Financial Aid (provided by the particular program)	94	41%

**Element Frequency* equals number of programs employing a particular service, divided by 232. Revised March 17, 2006 based on corrected reports by survey participants.

The most frequently used services by these programs were Early Information about Preparing for College, Academic Counseling/Advising, Family Involvement, Assistance with College Admissions, Financial Aid Applications or Placement Tests, and Tutoring/Mentoring Activities. Less than half the programs reported Dual Enrollment/Dual Credit Courses or Financial Aid programs.

Program Costs

Survey respondents identified program expenditures exceeding $52 million in 2003. Sixty-six percent of this amount was identified as federal funds.

Administrative Arrangements

From a list of five possible arrangements, respondents were asked to identify the nature of their working or administrative arrangements with the schools attended by their program participants. In addition, respondents were offered the opportunity to comment on other relationships not listed among the survey choices that might exist with the schools. Table 14 illustrates the responses to this question.

Table 14. Administrative Arrangements Between Higher Education Institutions and P-12 Schools Utilized by Programs Identified in Fall 2004 Survey

Administrative Arrangement	Number of Programs	Element Frequency*
Formal Partnership Plan Between Administering Institution and P-12 School(s)	109	47%
Data-sharing Agreements Between Administering Institution and P-12 School(s)	78	34%
Provisions for Use of P-12 School Facilities for Program's Activities	128	55%
Provisions for Release of Participants from Classes to Participate in Program's Activities	99	43%
Administering Institution's Representatives Routinely Included in P-12 School's Special Activities	128	55%

**Element Frequency* equals number of programs employing a particular service, divided by 232.

Eighty-five percent of the respondents indicated that at least one of these arrangements was employed in the program. Forty-five percent indicated that three or more of these arrangements existed between the program and the P-12 partner school. Of potential importance for program evaluation and accountability was the relatively low fraction (one in three) of programs that reported the existence of a formal data-sharing agreement.

Several respondents indicated that they also had arrangements that involved school personnel, particularly teachers and counselors, in the selection of candidates for participation in the program.

Performance Outcomes

Many institutions reported encouraging outcomes for graduates of their programs. Administrators were asked to identify the number of program graduates for the academic year ending August 31, 2003 that were known to have enrolled in an institution of higher education in the following year. As a base of reference, national data (2003) indicate that approximately 63.9 percent of all high school completers enroll in college in the fall following graduation or completion of their GED.[82] Most of the programs included in the survey, that reported college enrollment data for graduates of their programs, indicated rates greater than the national average college enrollment rate.

More than half the programs identified through the survey, however, did not report the numbers of program participants who had graduated or numbers of

[82] Digest of Education Statistics, 2004. National Center for Education Statistics. Table 182. College enrollment and enrollment rates of recent high school completers, by race/ethnicity: 1960 to 2003. March 2005. 17 March 2006. http://nces.ed.gov/programs/digest/d04/tables/dt04_182.asp.

program participants who had graduated and enrolled in an institution of higher education during the following year. Several explanations were cited. Many indicated that the data to make such determinations were dependent on follow-up surveys of participants or exchanges of data with other institutions that were delayed or otherwise problematic. Another reason reflected the fact that many programs served students in 2003 who were not at the grade levels that would generate a graduate or a college enrollee (i.e., the program may only have targeted the primary grades, or may have been a relatively 'young' program that had its first cohort of students still in middle school or early high school). A third reason was that some programs did not attempt to track students.

Observations from the Survey

While 55 Texas colleges and universities responded to the survey, 30 others, that may indeed have been operating such programs, did not. In addition, it is not unreasonable to assume that the 232 programs reported by those that did respond do not represent the total of such activity at these schools. It is quite likely that there are many more such intervention programs underway in Texas.

Nonetheless, the scope of the programs that were reported is substantial. The reports indicate that the programs served more than 319,000 students, with approximately 242,000 of these in Texas high schools.

When put in perspective, however, these programs are only reaching a fraction of the students who might benefit from them. The reported participant totals equaled approximately 7 percent of the total P-12 enrollment in Texas public schools in 2003. The programs reached only 21 percent of Texas students enrolled in high school.[83]

ANALYSIS OF SELECTED PROGRAMS

Of the program administrators responding to the survey, 90, or 39 percent of the total, reported participant-graduates and estimates of subsequent college enrollment on the part of these graduates in 2003. Further analyses of these programs permit additional insight into the relative effectiveness of different services that were available to students and the different administrative arrangements that exist among the institutions and schools involved.

The 90 programs served more than 172,000 students in the 2002-2003 academic year, and they accounted for more than half of the students served by all programs that responded to the survey. By far, most of these students, 96 percent, were in grades 9 -12; approximately 15,350 graduated from high school

[83] Texas Education Agency. 2002-2003 Student Enrollment Reports. 2 March 2005. http://www.tea.state.tx.us/adhocrpt/adste03.html. Percentage derived from student enrollment data.

in 2003. The reports indicate that these 90 programs spent almost $23 million in 2003; approximately two-thirds of the funds were identified as federal funds.

Among these programs were many federally financed TRIO programs operating in Texas that serve high school students, including Upward Bound and Talent Search. GEAR UP programs were also reported in the survey, but none with high school graduates reported in 2003; students in these programs were still in the middle and lower-high school grades. Also included were numerous initiatives unique to the particular institutions, including HB 400 initiatives (HB 400, 77th Legislature), which involve mandated plans to increase enrollment in institutions of higher education from certain Texas high schools with low college-going rates for their graduates.

A measure of particular interest in the analyses that follow is the percent of 2003 graduates reported enrolled in higher education in the 2003-04 academic year. This is derived from the survey's reports on participant-graduates and the institutions' reported higher education enrollment of these students. [84]

The percent of participant-graduates of these programs who subsequently enrolled in an institution of higher education ranges from 100 percent to 0 percent. Four out of five programs reported higher education enrollment rates for their participant-graduates that equaled or exceeded 65 percent. Such enrollment rates exceed the National Center for Education Statistics' (NCES) most recent estimate of the college-going rate for all high school graduates.

Among the factors that contribute to differences in the outcomes of these programs are the characteristics of the students who participate in them and the structure and effectiveness of the intervention programs in aiding participants to overcome the challenges they may face. Selected student and program characteristics were identified in the survey.

Of the 90 programs, 81 indicated that students who are either Black and/or Hispanic, economically disadvantaged, and/or otherwise potential first-generation college graduates were the primary focus of the programs. An additional 5 programs indicated that their primary targets included any student in a high school with low college-going rates, or a school that is a "feeder" school of such a high school. These students correspond to the HB 400 target groups.

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[84] Student-participant data of these programs are not routinely entered in the standard state databases maintained either by the Texas Education Agency or the Texas Higher Education Coordinating Board. Determining the outcomes of the programs, in terms of continuation of participant graduates to college and subsequent graduation, is often dependent on: the use of follow-up surveys of participants and their families; the use of a student tracking service, such as the *National Student Clearinghouse*; or, may be limited to knowledge of the decisions of only those students who happen to enroll in the same higher education institution that sponsored the intervention program. Follow-up surveys are often problematic because students, if located, are often under no obligation to respond. Similarly, the value of a voluntary clearinghouse database may be limited by lack of universal participation by higher education institutions.

Characteristics of Programs That Appear To Be Highly Effective

Tables 15 and 16 focus on programs that, in most cases, appear from the survey reports to be very effective programs. To analyze these programs, the 90 programs reporting graduation and enrollment outcomes are organized according to the percent of the 2003 graduates reported to have enrolled in an institution of higher education in the year following high school graduation. The sample is then divided between those that reported college enrollment of their graduates at rates greater than 63.9 percent and those with rates less than this benchmark. This value (63.9 percent) represents the NCES estimate of the average college enrollment rate for all recent high school completers in the nation. There are seventy-five of the programs with rates greater than 63.9 percent; fifteen have enrollment rates equal to or less than 63.9 percent.

Both sets of programs provide a range of services. As Table 15 illustrates, more of the programs with enrollment rates that exceed the national average, however, appear to have provided a broader selection of services and are more comprehensive than the others. The average number of types of services provided by those with enrollment rates exceeding 63.9 percent is 7.9, compared to 6.5 percent for the group with lower enrollment rates. The median number of services offered by the two sets of programs is 9 and 6, respectively. Given the broad spectrum of 'barriers' to a higher education for the target groups of these programs, the literature on the subject notes the similarly varied types of interventions. Finding that these Texas programs used a large number of these strategies is not surprising. It is also not surprising that the programs that appear to have the greater effect on college-going rates would offer even more types of services.

Table 15 illustrates the differences between the two sets of programs.

Both groups of programs focus on providing information to students about higher education opportunities, assisting participants with college and financial aid applications, and helping prepare students for admission and placement exams. However, the 75 programs with greater enrollment rates, with the exception of a modest difference in the promotion or provision of dual enrollment/dual credit courses, rely more heavily than others on those other services that contribute to increasing academic achievement, lead to cultural enrichment, and offer opportunities to participate in motivational activities. The programs with reported enrollment rates in excess of the 63.9 percent benchmark rely more on: family involvement; academic counseling; tutoring/mentoring activities; activities that promote the development of study and/or academic skills; P-12 school-to-college transition programs; and on activities that promote participation in cultural, social, or co-curricular events.[85]

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[85] To determine if these reported differences in the utilization of the different services are significant, Fisher's Exact Test was used. While several of the differences are substantial and may ultimately prove to be uniquely characteristic of highly effective programs, only differences in

Table 15. Comparative Frequency of Service Elements Among Those Programs Reporting Graduation and Enrollment Outcomes in 2003

	*Element Frequency**	
Service Element	**For Programs with Enrollment Rates > 63.9%**	**For Remaining Programs**
Academic Counseling/Advising	99 %	87 %
Early Information about Preparing for College	92	100
Assistance with College Admissions, Financial Aid Applications, or Placement Tests	92	87
Participation in Cultural/Social/Co-curricular Educational Activities or Events	89	47
Tutoring/Mentoring Activities	84	60
Development of Study and/or Specific Academic Skills	81	53
P-12 School-to-College Transition Activities	76	47
Family Involvement	76	67
Encouragement and/or Provision of Dual Enrollment/Dual Credit Courses	56	60
Financial Aid (provided by the particular program)	49	40

**Element Frequency* equals number of programs employing a particular service, divided by 75 and 15, respectively. Revised May 17, 2006 based on corrected reports by survey participants.

A review of published materials on P-16 intervention programs also indicates that an important set of variables that influences the effectiveness of these programs involves the relationships that exist between the institutions administering the intervention programs and the schools in which the student-participants are enrolled. It is suggested that the more integrated the intervention programs are with the schools, the more effective the programs may be. Table 16 illustrates the utilization of several common types of arrangements by these programs. Ninety-two percent of the programs with college-going rates greater than 63.9 percent reported employing one or more of these arrangements while 80 percent of the remaining programs also used one or more of these arrangements. Several institutions reported other types of working relationships with their P-12 partners. Not quite two-thirds of both sets of programs reported having three or more of these five cooperative arrangements.

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three service areas identified in these data are determined to be statistically significant. P-12 School-to-College Transition Activities, Development of Study and/or Specific Academic Skills, and Participation in Cultural/Social/Co-curricular Educational Activities or Events are calculated to be services of highly effective programs that distinguish them from other programs. The *p*-values calculated by Fisher's Exact Test for each of these three distributions are less than .05.

Table 16. Comparative Frequency of Administrative Arrangements Among Those Programs Reporting Graduation and Enrollment Outcomes in 2003

Administrative Arrangement	Frequency of Arrangement	
	For Programs with Enrollment Rates > 63.9%	For Remaining Programs
Formal Partnership Plan Between Administering Institution and P-12 School(s)	53 %	60 %
Data-sharing Agreements Between Administering Institution and P-12 School(s)	60	47
Provisions for Use of P-12 School Facilities for Program's Activities	72	60
Provisions for Release of Participants from Classes to Participate in Program's Activities	53	67
Administering Institution's Representatives Routinely Included in P-12 School's Special Activities	51	73

**Element Frequency* equals number of programs employing a particular arrangement, divided by 75 or 15, respectively.

However, none of the particular administrative arrangements described in Table 16 are associated significantly with differences in the respective program outcomes.

On the other hand, programs that reported on the graduation and subsequent enrollment outcomes for their participants (the sample of 90 discussed above) do indicate greater frequencies of the use of one or more of these administrative ties than others that did not report either high school graduates or college enrollees from among their participants. As might be expected, 58 percent of those in the sample of 90 programs examined above indicated that they had data-sharing arrangements between the institution and the P-12 partner schools. Of the remaining 142 programs that were identified in the fall survey, only 18 percent indicated that they had such data-sharing arrangements. This difference is statistically significant

This analysis demonstrates that there are differences in the types of services offered to participants of programs that appear to be more effective than others. The programs in this sample with the greater enrollment rates also offer a more complex array of services.

The data suggest that early information about preparing for college is a common and valuable feature of most programs. Importantly, though, the data also suggest that this service alone may not be sufficient. These data appear to affirm that highly successful programs must also couple the provision of early information about the value of college and the need to prepare for it with academic counseling, assistance with college admissions and financial aid applications, participation in cultural/social/co-curricular activities, development of study and academic skills, and P-12 school-to-college transition activities. The

literature is fairly consistent about the importance of academic preparation, combined with a range of services to address the barriers experienced by these students. These features promote greater college participation, and are crucial keys to success at the postsecondary level.

ANALYSES OF A SAMPLE OF PROGRAMS OBTAINED THROUGH THE 2004 SURVEY

THE SAMPLE PROGRAMS

After examining the data submitted by P-16 program administrators through the 2004 Survey, this Study identified a smaller sample of programs that would permit more intensive analyses of program operations and student outcomes. These sample programs provide the basis for the qualitative and quantitative analyses that follow.

Programs were considered for inclusion in the sample if they were clear about the goals regarding increasing higher education participation and success and if, collectively, they served a diverse mix of student target groups (e.g., race/ethnicity, economic status, 'first-generation' college) and geographic areas (e.g., urban and rural). Because of the need to validate outcomes over time, the selection effort focused first on programs that had produced high school graduates from among their participant group, at least since 1998 (so there would be at least a six-year period to track degree attainment). In several instances, newer programs that represented unique initiatives were also included.

The selection effort attempted to assemble a sample of programs that represents various types of service elements and different grade levels at which the programs first intervene. Only programs that met the other criteria and collected the participants' social security numbers were finally considered.

The student database available to this Study through the Texas Higher Education Coordinating Board, assembled in cooperation with the Texas Education Agency, is the principal tool available for tracking college-going behavior in Texas. It relies on social security numbers as the students' identifiers, making such identifiers the links to tracking students as they may navigate between and within the Texas public school and higher education databases.

Initially, 22 different programs were identified, contacted and visited. The site visits served to verify and elaborate upon the information obtained through the survey, to confirm that the program had the kind of student identifiers that would permit analyses, and to determine that the program administrators were willing to participate in a more extensive scrutiny of their operations. As more was learned about the goals, target groups, availability of data and other characteristics of these programs through the site visits and interviews, accompanied by the identification of two additional programs not initially identified in the survey, the screening process ultimately yielded 13 programs that comprise the sample examined in this Study.

The sample includes programs that serve students in major urban areas and other central cities, as well as smaller towns and rural areas. The majority of the programs are administered by institutions of higher education in cooperation with the various schools with which they work. The Study does include in the sample a major high school-based program, characterized as the Financial Aid Officer program. Collectively, the sample programs represent a variety of approaches to promoting greater participation and success in postsecondary education. They include:

- several programs representative of the federally-financed *TRIO* programs
    - Texas State Rural Talent Search (*Rural Talent Search)*
    - Texas Tech Upward Bound (*Upward Bound*)
    - University of North Texas Talent Search (*Talent (Search);*
- an HB 400 collaborative mandated by the Texas Legislature to improve low college-going rates at certain high schools) involving the Fort Worth ISD, Tarrant County College and The University of Texas at Arlington (*HB 400 Initiative*);
- a dual enrollment/dual credit program operated by Blinn College (*Dual Credit*);
- an SAT preparatory program conducted by The University of Texas at Dallas (*SAT Prep*);
- a Texas Prefreshman Engineering Program operated by The University of Texas at San Antonio (*TexPREP*);
- a summer high school-to-college program operated by Prairie View A&M University (*ACCESS*);
- a comprehensive, multi-site general outreach program operated by The University of Texas at Austin (*University Outreach*);
- a concurrent enrollment program operated by the University of Texas – Pan American (*Concurrent Enrollment*);
- a college connection program that assists graduating high school seniors complete financial aid and college entrance applications, operated by Austin Community College (*College Connection*);
- a high school-based Financial Aid Officer program, adopted in several Rio Grande Valley school districts, that provides an on-campus school-to-college coordinator to assist students in exploring college opportunities, preparing for postsecondary work and entrance examinations, and assisting them in completing financial aid and college entrance applications (*Financial Aid Officers*); and
- a less intensive general outreach program operated by Victoria College (*Outreach*).

Appendix B contains a detailed discussion of the nature of the participants, the services that are offered, and other characteristics of each of the sample programs. Appendix C provides information about the demographic characteristics of the graduates of each of the sample programs.

The sample programs provide a resource for the Study for making personal observations of the operations of the programs, gathering the opinions of students who have participated in the programs, gathering the opinions of the administrators of the programs, and accumulating the student records necessary for the quantitative analysis of the students' educational outcomes.

AN OVERVIEW OF THE IMPACT OF THE SAMPLE PROGRAMS

The impact of the sample programs has been examined from several perspectives. With respect to *Participation* in higher education, graduates of the sample intervention programs have been tracked into Texas higher education through the first two years following high school graduation. Because the timing of entry is of interest, students found in higher education have been reported as entering in the fall following high school graduation, the first year following graduation, and the first or second years following graduation.

To examine *Success* in higher education, two measures have been examined. First, student persistence is illustrated based on the number of students who enrolled in the first year following high school graduation who persist to the second year. Secondly, for those programs that have been operative at least since 1999, students' progress through Texas public institutions of higher education is presented through the sixth year following high school graduation. This analysis allows reporting on student degree attainment outcomes as well as reporting on those students still enrolled in college who have yet to obtain a degree.

The quantitative analyses first compare the former program participants' outcomes with several statewide reference groups based on similar educational outcomes of Texas largest racial/ethnic groups and by status as either economically disadvantaged or not. The second level of the quantitative analyses examines the former program participants' outcomes in contrast to comparison groups constructed to match the unique characteristics of the participants of the sample programs, and the schools they attended, using a statistical technique involving the calculation of propensity scores.[86]

[86] Rubin, Donald B. "Estimating Causal Effects from Large Data Sets Using Propensity Scores". Annals of Internal Medicine. Volume 127 (8S) Supplement. 15 October 1997. http://www.stat.columbia.edu/-gelman/stuff_for_blog/propensity.html.

Another perspective from which the programs have been examined involves analyses of the opinions of former program participants who did go on to enroll in a Texas higher education institution, as well as the opinions of the administrators of the intervention programs.

AN EXAMINATION OF THE QUANTITATIVE DIFFERENCES IN HIGHER EDUCATION PARTICIPATION AND SUCCESS ASSOCIATED WITH THE SAMPLE PROGRAMS

Comparison of Program Outcomes with Statewide Reference Groups

The first level of comparison of program outcomes examines the higher education participation rates of the sample program participants and several key reference groups of the Texas high school graduating classes of 2002, 2003, and 2004. (Appendix D includes enrollment outcomes tables which provide an overview of several of the enrollment outcomes of graduates of the sample programs and similar data for the major state-wide reference groups.)

As a first step in a more detailed comparison, the sample programs are characterized by the demographic and economic characteristics of the students they serve. Table 17 lists the sample programs and indicates the fraction of the participant-high school graduates who are in the groups that historically have had the greatest challenges to participation and success in higher education. Hispanic or Black graduates, as one category, along with graduates who are economically disadvantaged, represent two of the principal risk groups. Ideally, the programs' high school graduates could also be characterized by the first-generation status of the students, but those data are not available.

Table 17. Selected Characteristics of Sample Program Participants Who Have Graduated From a Texas Public High School, 2004

	Participant Characteristics	
Program	**Percent Black or Hispanic**	**Percent Economically Disadvantaged**
College Connection	61.6%	41.5%
Dual Credit	7.4%	6.7%
ACCESS	98.9%	43.7%
Upward Bound	>78.6%	60.7%
Rural Talent Search	76.5%	43.9%
Talent Search	47.3%	34.7%
HB 400	84.8%	61.9%
University Outreach	93.7%	63.0%
SAT Prep	N/A	N/A
Concurrent Enrollment	>89.6%	59.8%
TexPREP	76.3%	49.0%
Outreach	49.5%	29.1%
Financial Aid Officers	>95.9%	79.7%

As Table 17 illustrates, most of these programs' activities focus on Hispanic or Black students, the majority of whom are economically disadvantaged. The programs with participant characteristics to the contrary have a large rural/small independent town constituency whose students are mostly White.

Table 18 presents a summary of key performance outcomes of the sample programs for the 2002, 2003, and 2004 high school graduates. For these program participants who can be found in Texas public and private institutions of higher education, the table illustrates the percent of the total participant class found in the first fall following graduation and the first year following graduation.

Table 18. Program Participants Found Enrolled in Texas Higher Education in the Fall Following and the 1st Year Following High School Graduation[87]

	Class of 2002			Class of 2003			Class of 2004	
Program	**Percent Found Fall 2002**	**Percent Found 2002-03**		**Percent Found Fall 2003**	**Percent Found 2003-04**		**Percent Found Fall 2004**	**Percent Found in 2004-05**
College Connection	N/A	N/A		N/A	N/A		52.1%	57.0%
Dual Credit	89.6%	91.3%		86.9%	89.3%		90.4%	91.6%
ACCESS	89.1%	92.2%		94.0%	95.5%		89.7%	94.3%
Upward Bound	78.6%	85.7%		100.0%	100.0%		85.7%	96.4%
Rural Talent Search	63.5%	67.6%		46.2%	55.1%		49.0%	53.1%
Talent Search	51.4%	57.8%		62.4%	66.2%		53.6%	58.1%
HB 400	N/A	N/A		31.3%	38.4%		43.4%	49.0%
University Outreach	64.3%	72.5%		67.5%	73.4%		64.3%	70.7%
SAT Prep	62.0%	66.2%		57.9%	68.4%		N/A	N/A
Concurrent Enrollment	89.7%	92.6%		89.8%	92.5%		92.2%	93.5%
TexPREP	70.4%	76.8%		73.6%	80.4%		74.6%	79.9%
Outreach	N/A	N/A		59.6%	64.5%		60.4%	63.7%
Financial Aid Officers	52.6%	62.0%		54.2%	62.5%		58.7%	64.2%

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Table 19, which follows, illustrates the percent of those enrolled in the first year that persisted to the sophomore year.

[87] Note: Rates are based on students with valid SSNs only.

Table 19. Program Participants Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Who Persisted to the 2nd Year[88]

	Class of 2002	Class of 2003
Program	**Percent Persisted to 2003-04**	**Percent Persisted to 2004-05**
College Connection	N/A	N/A
Dual Credit	94.4%	93.0%
ACCESS	86.4%	85.9%
Upward Bound	75.0%	89.5%
Rural Talent Search	76.0%	74.4%
Talent Search	86.9%	73.9%
HB 400	N/A	70.9%
University Outreach	87.0%	82.1%
SAT Prep	78.7%	76.9%
Concurrent Enrollment	93.9%	93.5%
TexPREP	89.4%	81.7%
Outreach	N/A	86.4%
Financial Aid Officers	79.5%	77.3%

Tables 20, 21 and 22 present comparisons of the rate at which these programs' participant-graduates are found enrolled in Texas institutions of higher education in contrast to the experience of all Texas high school graduates and the same experience for reference groups that are representative of the race/ethnicity and the economic status of these various programs' students. The literature and the work of this Study have demonstrated the co-relationship between postsecondary educational outcomes and race/ethnicity and economic status. The reference groups for these comparisons are constructed to include the same proportions of economically and non-economically disadvantaged White, Black, Hispanic, or All Other high school graduates as are represented in the various program participant profiles. The statewide college-going experience of these subcategories of the high school classes for 2002, 2003, and 2004 are then

[88] Note: Rates are based on students with valid SSNs only.

applied on this weighted basis to come up with the reference group college-going percentage.

Table 20 illustrates these comparative relationships for the high school classes of 2002, 2003, and 2004 with respect to the percentages of the classes found enrolled in higher education in the fall immediately following graduation. Tables 21 and 22, illustrating enrollment in the first year following graduation and persistence to the second year, follow.

These analyses are intended to present a comparison of the program outcomes with reference groups compiled with a minimum of readily acceptable assumptions about the groups' characteristics. The section of the Study that follows these comparisons utilizes a statistical technique involving propensity scores to compile comparison groups reflecting not only race/ethnicity and economic status, but also several other variables.

To illustrate the relative differences in outcomes in Tables 20, 21, and 22, the percentages of the former participants found enrolled or persisting (as the case may be) in higher education are divided by the corresponding percentages for all Texas high school graduates and the percentages for each of the programs' unique reference groups. For example, in Table 18, 100 percent of the 2003 Upward Bound graduates have been found enrolled in Texas institutions of higher education in the fall following graduation. In Table 20, Upward Bound's fall experience is contrasted with the 52.4 percent of all Texas graduates (those with valid student identifiers) who similarly were found enrolled that first fall. Upward Bound's rate of 100 percent is 191 percent of the statewide rate and, as the Table shows, is, therefore, 91 percent *greater than* the rate for all high school graduates. Similarly, when compared to a reference group weighted to resemble the largely Hispanic and economically disadvantaged caseload of this Upward Bound program, the relative performance is even more striking. The Upward Bound program's students are found to be enrolling at a rate 126.6 percent *greater than* the program's reference group.[89]

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[89] The mathematical representations of these comparisons are:

Program Rate = x
All High School Graduates Rate = y
Reference Group Rate = z

Percent by which Program Rate Exceeds All High School Graduates Rate = (x/y) – 1.0

Percent by which Program Rate Exceeds Reference Group Rate = (x/z) – 1.0

Table 20. Program Participants Found Enrolled in Texas Higher Education in the Fall Following High School Graduation Compared to All Texas HS Graduates and to HS Graduates with Similar Racial/Ethnic and Economic Characteristics

	HS Class of 2002		HS Class of 2003		HS Class of 2004	
Program	**Percent Greater than All HS Grads**	**Percent Greater than Reference Groups**	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**
College Connection	N/A	N/A	N/A	N/A	-0.6%	6.3%
Dual Credit	71.1%*	49.4%*	66.0%*	45.5%*	72.4%*	54.0%*
ACCESS	70.1%*	104.4%*	79.6%*	100.6%*	71.0%*	95.4%*
Upward Bound	50.0%*	69.3%*	91.0%*	126.6%*	63.4%*	89.1%*
Rural Talent Search	21.3%*	39.0%*	-11.9%	-2.4%	-6.6%	2.5%
Talent Search	-1.9%	0.2%	19.3%*	21.5%*	2.2%	7.4%
HB 400 Initiative	N/A	N/A	-40.3%	-29.8%	-17.2%	-2.6%
University Outreach	22.8%*	52.7%*	29.0%*	56.4%*	22.7%*	44.0%*
SAT Prep	18.3%	49.0%*	10.6%	27.9%	N/A	N/A
Concurrent Enrollment	71.2%*	106.6%*	71.5%*	105.5%*	75.8%*	103.4%*
TexPREP	34.4%*	50.8%*	40.5%*	58.4%*	42.3%*	59.1%*
Outreach	N/A	N/A	13.7%	16.7%	15.2%*	18.2%
Financial Aid Officers	0.4%*	26.3%*	3.4%	27.8%*	12.0%*	35.4%*

Note: An asterisk, *, indicates that the arithmetic difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention, based on the chi-square test of homogeneity between college-going rates of the respective groups. A positive value indicates that the experience of the program participants exceeds that of either the entire high school graduate population or the reference group, respectively. Table represents students with valid SSNs only.

As Table 20 illustrates, several of the programs' participants are found to be enrolling in the fall following high school graduation at rates significantly greater than the experience of all members of the of the respective graduating classes or the reference groups. Participants in Dual Credit, ACCESS, Upward Bound, Rural Talent Search, Talent Search, University Outreach, Concurrent Enrollment, TexPREP, Outreach, and Financial Aid Officers programs are found, at different times, to be enrolled in Texas colleges and universities at rates significantly greater than either or both the statewide average for all graduates or their respective program reference groups.

The Upward Bound program's apparent high level of performance is also reflected in Table 21 which addresses enrollment rates in the first full year following high school graduation. The program is one of a number of nationally known comprehensive service programs. This program typically inducts students early in their high school career and provides them the complete array of potential services discussed in a previous chapter.

With but a couple of exceptions, the other programs in the sample with substantial double-digit performance differences are also largely comprehensive in their service approach and intervene early in the students' high school career. In the case of the TexPREP program, students are recruited to participate as early as the 6th grade. Reflecting the unique racial/ethnic and economic characteristics of each program's caseload, which for the most part include proportionately more Hispanic, Black and economically disadvantaged students than the overall state average, most of the programs' performance margins when compared to their own reference groups are greater than the performance difference when compared to the overall state average.

Table 21. Program Participants Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Compared to All Texas HS Graduates and to HS Graduates with Similar Racial/Ethnic and Economic Characteristics

	HS Class of 2002		HS Class of 2003		HS Class of 2004	
Program	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**
College Connection	N/A	N/A	N/A	N/A	-3.3%	2.6%
Dual Credit	54.4%*	38.8%*	51.5%*	36.3%*	55.3%*	41.8%*
ACCESS	55.9%*	76.7%*	61.9%*	74.1%*	59.8%*	75.3%*
Upward Bound	45.0%*	58.5%*	69.5%*	93.9%*	63.5%*	83.8%*
Rural Talent Search	14.3%	27.4%	-6.5%	1.5%	-10.0%	-2.8%
Talent Search	-2.2%	-0.6%	12.3%*	14.3%	-1.5%	2.9%
HB 400	N/A	N/A	-34.9%	-26.1%	-17.0%	-5.6%
University Outreach	22.7%*	44.0%*	24.5%*	44.3%*	19.8%*	35.9%*
SAT Prep	12.0%	32.4%	16.0%	28.9%	N/A	N/A
Concurrent Enrollment	56.6%*	80.3%*	56.8%*	80.4%*	58.5%*	78.3%*
TexPREP	29.8%*	41.4%*	36.3%*	49.8%*	35.5%*	48.3%*
Outreach	N/A	N/A	9.3%	11.6%	8.1%	10.6%
Financial Aid Officers	4.9%*	24.4%*	5.9%*	25.0%*	8.9%*	26.9%*

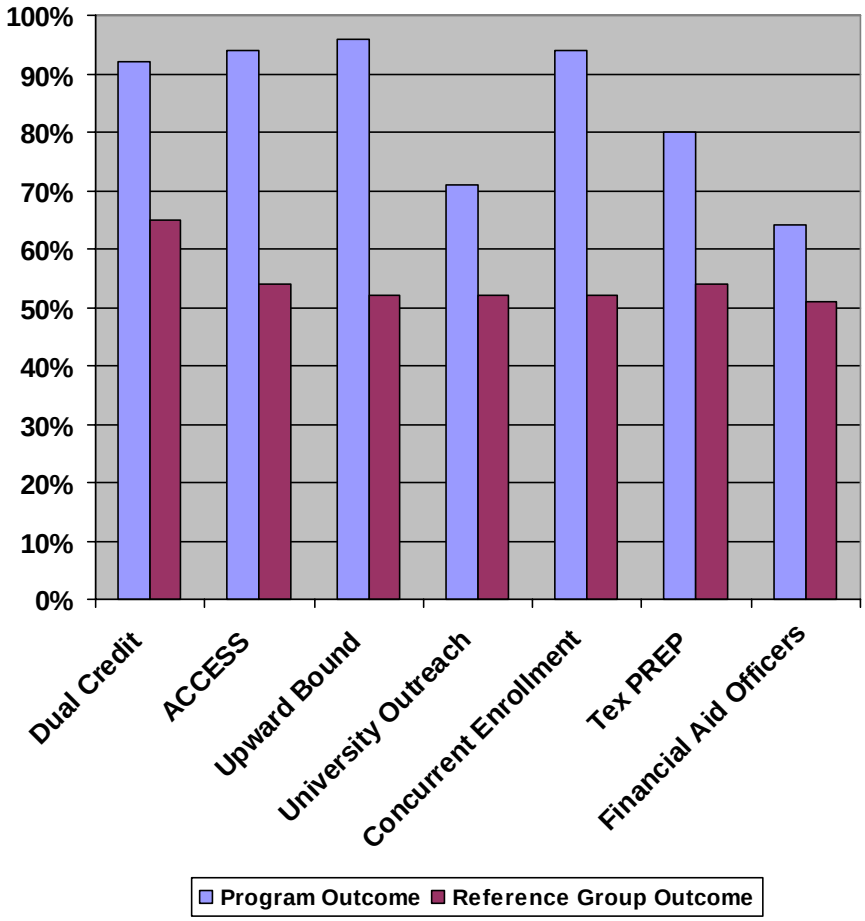
Note: An asterisk, *, indicates that the difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention , based on the chi-square test of homogeneity between college-going rates of the respective groups. A positive value indicates that the experience of the program participants exceeds that of either the entire high school graduate population or the reference group, respectively. Table represents students with valid SSNs only

By and large, programs that excelled in getting participants enrolled in the first fall following graduation from high school also demonstrated significantly higher enrollment rates for their graduates through the first year following high school.

Significant differences in 2004 enrollment rates for seven of the programs and their respective reference groups are identified in Table 21.

Chart 2 further illustrates these differences in outcomes. Differences in enrollment rates in Chart 2 range from 13 percentage points for the Financial Aid Officers compared to its reference group to 44 percentage points that separate the Upward Bound participant enrollment rate from its reference group's rate.

Chart 2. Percent of Participants of Selected Programs Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Compared to HS Graduates with Similar Racial/Ethnic and Economic Characteristics, HS Class of 2004



Differences in enrollment rates in the fall following high school graduation between these programs' participants and their respective reference groups (Table 20) are even more dramatic.

Table 22 compares the important 'persistence to sophomore year' rates of former participants of these programs with the experiences of the same reference groups used in the previous tables. As discussed earlier, not only is early enrollment in college considered critical to eventual success, but persistence to the second year is also a critical benchmark on the pathway to a degree or

certificate. Accordingly, the data reflecting the Texas students' patterns of early entry to college and persistence to the sophomore year indicate a not surprising co-relationship. The greater the fraction of recent high school graduates (2002 and 2003 graduates) found enrolled in the first year after graduation that had enrolled in that fall, the greater the fraction of those who are also found enrolled in the second postsecondary year.[90]

As Table 22 illustrates, former participants of a majority of the sample programs were indeed found enrolled in the sophomore year at rates greater than those for their respective reference groups. Maintaining academic momentum into the second year bodes well for the eventual success of these students. Those programs, whose former participants tend to enroll in the fall following graduation rather than later in that first year, also tend to have the greater persistence rates.

Table 22. Program Participants Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Who Persisted to the 2nd Year, Compared to All Texas HS Graduates and to HS Graduates with Similar Racial/Ethnic and Economic Characteristics

	HS Class of 2002		HS Class of 2003	
Program	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**	**Percent Greater than All HS Grads**	**Percent Greater than Reference Group**
College Connection	N/A	N/A	N/A	N/A
Dual Credit	15.5%*	12.7%*	14.4%*	11.2%*
ACCESS	5.7%	12.9%	5.7%	12.4%
Upward Bound	-8.3%	-5.8%	10.1%*	15.4%
Rural Talent Search	-7.1%	-2.8%	-8.4%	-5.0%
Talent Search	6.3%	8.1%	-9.1%	-7.3%
HB 400	N/A	N/A	-12.7%	-7.5%
University Outreach	6.4%	12.4%*	1.1%*	7.6%
SAT Prep	-3.7%	4.6%	-5.4%	1.9%
Concurrent Enrollment	14.8%*	19.9%*	15.0%*	20.5%*
TexPREP	9.4%*	12.8%*	0.5%	4.2%
Outreach	N/A	N/A	6.3%	7.6%
Financial Aid Officers	-2.8%	2.7%	-4.9%	0.9%

Note: An asterisk, *, indicates that the difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention, based on the chi-square test of homogeneity between college-going rates of the respective groups. A positive value indicates that the experience of the program participants exceeds that of either the entire high school graduate population or the reference group, respectively. Table represents students with valid SSNs only.

[90] Data derived from the database developed for the P-16 Study from Texas Education Agency and Texas Higher Education Coordinating Board files. Please see the Sample Programs Outcomes in Appendix D.

PERSISTENCE AND DEGREE ATTAINMENT FOR PARTICIPANTS OF SELECTED PROGRAMS

To examine persistence to degree of former participants of the sample programs, graduates of the programs were tracked through Texas higher education for the most recent six-year period, 1999-2000 through the 2004-2005 academic year. Usable data for seven of the sample programs were available for the high school class of 1999 and were employed to locate students enrolled in Texas public 2-year and 4-year colleges and universities. Table 23 illustrates the outcomes for these students over this period, in terms of those who had earned a degree or certificate of any kind and those who had not, but were still enrolled at the end of the period.

Table 23. Percent of Program Participants Found Enrolled in a Texas Public Higher Education Institution in the 1st Year Following High School Graduation Who Had Earned a Degree or Certificate or Who Were Still Enrolled in Texas Higher Education in the Sixth Year Following High School.[91]

	HS Class of 1999
Program	**Percent With a Degree or Certificate or Still Enrolled in 2004-05**
College Connection	N/A
Dual Credit	N/A
ACCESS	57.3%
Upward Bound	33.3%
Rural Talent Search	N/A
Talent Search	51.0%
HB 400	N/A
University Outreach	75.9%
SAT Prep	N/A
Concurrent Enrollment	86.1%
TexPREP	65.9%
Outreach	N/A
Financial Aid Officers	55.0%
All Public High School Graduates	59.4%

[91] Note: Data not available (N/A) for this table include missing values for programs that were not in operation in 1999, for which the data were not submitted, or for which the student counts in certain cells in the detail tables were less than 5 and therefore could not be disclosed. Table represents students with valid SSNs only

As is the case with the enrollment outcomes discussed in the preceding section, graduates of several of the sample programs have gone on to obtain degrees/certificates or to persist at rates greater than those of several state-wide reference groups. More may be learned about degree outcomes with future analyses that include cohorts from more programs and those that began college work when the THECB data reflect public and private institutional enrollment, that is those who entered schools in the 2001-2002 academic year.

The foregoing analyses and discussion provide only one framework for analyzing the services provided participants in these intervention programs. The analyses attempt to control only for time, race/ethnicity, and economic status. The following analyses add to the foregoing work by controlling for a wider array of variables through a statistical technique using propensity scores.

Available quantitative data, unfortunately, do not permit the disaggregation of the effects of other intervention programs (with the exceptions noted in the following analyses) that may be present. Nor do the data permit the examination of the differences in outcomes that may be associated with different intensity levels of the various services provided by the programs. These kinds of intervention programs (with some exception for dual enrollment and concurrent enrollment programs) are not included in the standard student reporting systems maintained by either the Texas Education Agency or the Texas Higher Education Coordinating Board. Therefore, knowledge about who (students) are participants in which programs, for how long, and to what degree of involvement (and to what effect) may only be learned through concerted efforts and even then, much of the data may not be obtainable.

COMPARISON OF PROGRAM OUTCOMES WITH PROPENSITY-SCORED COMPARISON GROUPS

To more precisely measure the relative outcomes of the intervention programs, the outcomes for these students were examined in contrast with a comparison group compiled through a statistical technique using propensity scores[92]. This technique matches the individual graduates of these schools with a sample of high school graduates in the same year who are similar by not only race/ ethnicity and economic status, but also by gender, level of English proficiency, Texas Education Agency 'At-Risk' status, and certain other TEA program characteristics. In all, 10 sets of variables were available and suitable for these

[92] Propensity scoring is one of the most developed methods for composing a control group that will allow for a valid statistical analysis in this situation. The use of this method simulates the benefits of random assignment by deliberately balancing the measured student variables to avoid overt bias. Statistical theory suggests that the reduction of overt bias similarly reduces the amount of hidden bias.

analyses. Appendix E contains the results of the propensity score analyses. Appendix F contains a detailed discussion of this technique.

As in the preceding section, the propensity score analyses also measure the relative differences in college enrollment and persistence patterns for the sample participants and their respective comparison groups. Table 24 contrasts the enrollment patterns of the graduates of the sample programs with those of their respective comparison groups for the Fall following high school graduation. The 'found in higher education rate' for the sample program participants is illustrated in terms of the percentage greater (a minus indicates the percent less than) than the percent of the control group(s) found so enrolled.

Table 24. Program Participants Found Enrolled in Texas Higher Education in the Fall Following High School Graduation Compared to Each Program's Comparison Group[93]

	Class of 2002	Class of 2003	Class of 2004	Three Year Total
Program	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**
College Connection	N/A	N/A	-6.0%	-6.0%
Dual Credit	38.9%*	34.4%*	34.3%*	35.6%*
ACCESS	90.0%*	60.5%*	66.0%*	70.4%*
Upward Bound	100.0%*	100.0%*	71.4%*	88.6%*
Rural Talent Search	42.4%*	12.5%	2.3%	17.6%
Talent Search	-12.0%	24.4%*	-7.0%	2.0%
HB 400	N/A	-30.0%	-11.4%	-18.6%
University Outreach	26.1%*	31.7%*	17.7%*	24.9%*
SAT Prep	2.3%	-4.4%	N/A	-2.9%
Concurrent Enrollment	45.8%*	39.5%*	40.2%*	41.7%*
TexPREP	19.0%*	35.8%*	29.3%*	27.9%*
Outreach	N/A	4.8%	14.6%	9.5%
Financial Aid Officers	29.9%*	23.2%*	23.9%*	25.4%*

Note: An asterisk, *, indicates that the arithmetic difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention.

[93] The percentage differences illustrated in Tables 24, 25, and 26 are the *relative* differences in outcomes so that the reader may have a better appreciation of the magnitude of the different outcomes (See discussion on page 63.). Table represents students with valid SSNs only.

Table 24 presents the same general pattern as was revealed in Table 20, in which table the sample programs' outcomes were compared to the experience of the two-variable reference groups. High school graduates who had participated in the Dual Credit, ACCESS, Upward Bound, University Outreach, Concurrent Enrollment, TexPREP, and Financial Aid Officers programs were found enrolled in a Texas higher education institution, consistently, at rates significantly greater than their respective comparison groups.

In similar fashion, Table 25 presents the enrollment outcomes for the full 1st year following high school graduation.

Table 25. Program Participants Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Compared to Each Program's Comparison Group

	Class of 2002	Class of 2003	Class of 2004	Three Year Total
Program	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**
College Connection	N/A	N/A	-6.1%	-6.1%
Dual Credit	31.7%*	27.2%*	28.7%*	29.1%*
ACCESS	68.6%*	40.9%*	39.0%*	47.1%*
Upward Bound	71.4%*	81.8%*	80.0%*	77.5%*
Rural Talent Search	35.1%*	7.5%	-9.4%	8.5%
Talent Search	-7.8%	17.2%*	-12.2%	-1.0%
HB 400	N/A	-27.1%	-10.7%	-17.3%
University Outreach	24.8%*	29.3%*	21.6%*	25.2%*
SAT Prep	-4.1%	4.0%	N/A	-3.8%
Concurrent Enrollment	31.1%*	33.8%*	33.5%*	32.8%*
TexPREP	16.7%*	30.0%*	26.9%*	24.5%*
Outreach	N/A	3.5%	2.7%	3.1%
Financial Aid Officers	26.2%*	23.3%*	17.8%*	22.1%*

Note: An asterisk, *, indicates that the arithmetic difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention.

The same seven programs with participants enrolling in the fall following graduation at significantly higher rates than their comparison groups also appear in this table to have students enrolling at significantly greater rates through the first year after high school.

Chart 3 illustrates, for the seven programs identified in Tables 24 and 25 that have been observed to have significantly greater proportions of their former participants found in Texas colleges, the percent of these participants enrolled in the first year following high school. The percent of their respective comparison groups' students similarly found enrolled are also shown in this chart.

Chart 3. Percent of Participants of Selected Programs Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Compared to a Comparison Group of HS Graduates Compiled Through Propensity Scores , HS Class of 2004

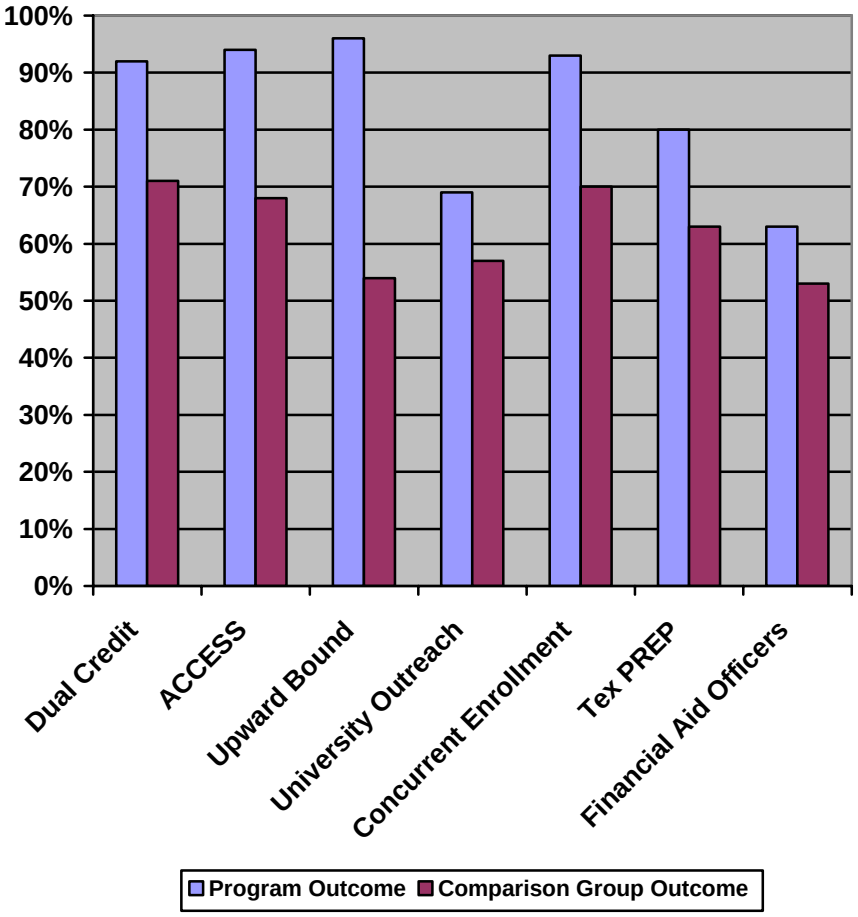


Table 26, which follows, shows the relative rates at which those students who enrolled in the first year after high school were found enrolled in the second successive year following high school, for both the sample programs and their respective control groups. Graduates, who had participated in five of the programs, as indicated with an asterisk in the table for the total three year period observed, were found to persist in college at significantly greater rates.

Table 26. Program Participants Found Enrolled in Texas Higher Education in the 1st Year Following High School Graduation Who Persisted to the 2nd Year, Compared to Each Program's Comparison Group

	Class of 2002	Class of 2003	Class of 2004	Three Year Total
Program	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**	**Percent Greater than Comparison Group**
College Connection	N/A	N/A	7.1%	7.1%
Dual Credit	5.6%*	6.5%*	22.1%*	11.7%*
ACCESS	12.1%	14.0%	36.3%*	22.1%*
Upward Bound	-4.5%	55.8%	1.0%	10.7%
Rural Talent Search	-3.0%	-9.8%	-19.2%	-10.5%
Talent Search	-3.8%	-10.0%	7.9%	-2.6%
HB 400	N/A	-12.8%	12.9%	2.0%
University Outreach	10.8%	7.0%	8.2%	7.8%*
SAT Prep	1.5%	-8.4%	N/A	2.3%
Concurrent Enrollment	9.2%*	6.5%*	30.1%*	14.9%*
TexPREP	10.0%*	-4.1%	5.3%	3.4%
Outreach	N/A	-1.4%	18.1%	7.2%
Financial Aid Officers	.3%	-3.9%	13.8%*	3.3%*

Note: An asterisk, *, indicates that the arithmetic difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention.

The analyses of the enrollment and persistence patterns of these sample programs, using the propensity score technology, yield conclusions similar to those drawn from the preceding comparisons to reference groups compiled using only race/ethnicity and economic status variables. The same seven programs exhibit statistically significant results with respect to early enrollment in college on the part of their former participants. The propensity score analysis of persistence to a second year of college affirm the earlier conclusions about the "staying power" of former participants of the Dual Credit and Concurrent Enrollment programs and also identify the ACCESS, University Outreach, and Financial Aid Officer programs as producing students found to persist at significant rates.

In the course of the Study, several programs (College Connection, Rural Talent Search, Concurrent Enrollment, University Outreach, and Financial Aid Officer programs) were identified as having some of the same participants in two or more of these programs. The propensity score tests were conducted on a distribution of the participants of these three programs that randomly assigned to only one of the programs those who may have actually participated in two or more. This was done to minimize any bias to the perceived outcomes of the programs that might result from inclusion of a student who received such extra services.

There is also the possibility that these participants as well as the others in the remaining sample programs were receiving other intervention services from other programs not identified in the Study. Unfortunately, there are no comprehensive student or program records that indicate participation in such programs that would permit the disaggregation of these program effects.

The available data for most of the sample programs also do not permit precise analyses of the potential impact on differences in expected outcomes due to possible 'selective recruitment or enrollment' practices on the part of the programs and students. Are the students who have been observed to enroll in the Dual Enrollment program, for example, predisposed to pursuing a college degree to a significantly greater degree than the control group? This general concern does not apply, though, to the College Connection and the Financial Aid Officer programs that were examined.

The samples for these two programs represent the entire graduating classes of the public high schools that employed these services. The College Connection was organized in 2004 and served one high school class that year, the graduating class of San Marcos High School. The FAO programs analyzed in this Study were conducted at all six of the high schools in the Edinburg CISD and the Pharr-San Juan-Alamo ISD. Since these are public high schools a concern about the analyses being biased due to selective recruitment or enrollment should not apply.

To assess if the various sample programs' participants might have been higher achievers than their comparison group counterparts, the average 8th grade Texas Learning Index (TLI) scores of the program graduates were compared to those of the comparison group. The TLI is derived from the TASS standardized math and reading tests that most of these students took in the 8th grade. The 8th grade tests were chosen because they would have been administered at a time in most of these students' educational careers before they might have benefited from one of these intervention program's services. (Some of the programs do recruit students in earlier grades and, in such cases there could be some program impact on academic performance by the 8th grade.)

The detailed TLI data for the total of the three years that were observed is illustrated in Appendix E. There are significant differences in the average scores between the program participants and the respective comparison groups for several of the programs. Participants in the University Outreach, Dual Credit, TexPREP, Rural Talent Search, and Concurrent Enrollment programs, on average, had higher test scores. Participants in the HB 400 initiative had significantly lower average scores than did those in the comparison group. However, average scores for all groups, program and comparison alike, exceeded the passing standard of 70.

PARTICIPANT OPINIONS OF HELPFULNESS OF SERVICES PROVIDED BY THE SAMPLE PROGRAMS

A major facet of the study involved gathering the perceptions and opinions of students who participated in the programs and who subsequently enrolled in a Texas institution of higher education. This part of the study is qualitative in nature and provides additional insights into the nature of these intervention programs and their effect on the students.

Most of the programs in the sample do not track the progress of participants after the first year following graduation from high school. For some, a survey of the students in the summer following graduation may be the last organized contact the administrators have with that graduating class. However, some programs do maintain a tracking system for former students and have fairly reliable contact information.

A questionnaire was designed to gain from former program participants their opinions about the relative helpfulness of the services offered by the programs in terms of helping the students in their decision-making about and their preparations for college work.

Students were asked to characterize each of the services provided by the program according to whether they were *Absolutely Helpful, Mostly Helpful, Somewhat Helpful,* or *Not Helpful*.

Opinions were solicited from former program participants in two ways. First, for those programs that maintain contact with former students, last known addresses of selected groups of former participants (high school graduates from the 2003 and 2004 grad years) were obtained. These students were contacted by mail and asked to complete the service questionnaire. For those programs that do not have a reliable tracking effort but are aware of former program participants currently enrolled on their respective campuses, program administrators were asked to organize focus group meetings with a small number of students. These students were interviewed and provided an opportunity to complete the questionnaire.

In the summer and fall of 2005, responses to the questionnaire were obtained from 114 former participants of nine programs; 52 were obtained through the mail survey and 62 were obtained in focus group interviews. All but two of the students were enrolled or planning to enroll in the fall 2005 semester; 82 percent of them had first enrolled in a higher education institution prior to 2005. Students representing nine of the thirteen sample programs participated in the survey and focus group discussions. Those programs for which no former students were contacted include the HB 400 initiative, the dual enrollment/dual credit program, the College Connection program, and the students from the schools with Financial Aid Officers.

In addition to questions about the services offered by the program, the students were offered the opportunity to comment, in their own words, about the impact of the program on their decision to go to college and on their preparations to succeed in college. Table 27 summarizes the responses of all participating students from the nine programs contacted.

Because not all programs offer all services, responses to each question were tabulated and converted to a weighted value ranging from a possible high score of 10 to a possible low score of 0 for only those instances in which a service is generally provided to participants by a particular program. The composite weighted score for each service counts only those cases in which a service was provided by a particular program so that the relative values of the services are not biased by the sheer number of programs that may employ them. If simple frequencies of the responses were used, for example, a highly valued service that may be provided for only three out of five programs could receive a lower score than a lesser service that is provided by all five programs; the relative value to the recipients of the former service would be lost in such a comparison.

Table 27. Former Program Participants' Opinions Regarding Relative Helpfulness of Programs' Services

Service	*Relative "Helpfulness" Score*
Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation	8.6
Encourage and/or Provision of Dual Enrollment/Dual Credit Courses	8.2
P-12 School-to-College Transition Activities	8.1
Academic Counseling/Advising	7.7
Early Information about Preparing for College	7.5
Development of Study and/or Specific Academic Skills	7.5
Participation in Cultural/Social/Co-curricular Educational Activities or Events	6.8
Tutoring/Mentoring Activities	6.7
Financial Aid (provided by the program)	6.2
Family Involvement	5.5

A composite score of 6.7 or greater indicates that the collective opinion of the respondents is that the service in question is deemed *'Mostly Helpful'* for those for whom the service was available. A score of 10.0 would indicate that all eligible respondents considered the service *Absolutely Helpful*. As Table 27 illustrates, six of the ten services evaluated by the participants who were surveyed scored substantially higher than 6.7.

The two services that were rated the highest by students, *Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation* and *P-12 School-to-College Transition Activities* also enjoyed a broad level of support as services mostly helpful to the students' decisions to go to college and their preparations for college. Students from each of the programs offering *Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation* services expressed their opinion that, on average, the program was at least *Mostly Helpful*. Similarly, the ratings for *P-12 School-to-College Transition Activities*, from respondents from 8 of the 9 programs offering the service, were greater than 6.7 indicating a broad consensus that these services made a difference. In other words, students from a TRIO program in North Texas appreciated the value of these services as well as did students from a Concurrent Enrollment program in the Rio Grande Valley, as did students from other programs in other parts of the state.

Similarly, *Academic Counseling/Advising* services earned high marks from former participants of 7 of the 8 programs that offer this service from which responses were received. *Development of Study and/or Specific Academic Skills*

and *Early Information about Preparing for College* were also well regarded by former participants from a majority of the sample programs responding.

The individual program reports in Appendix B contain a summary of the opinions of each program's participants as well as selected comments by former participants.

OPINIONS OF PROGRAM ADMINISTRATORS REGARDING HELPFULNESS OF PROGRAM SERVICES

The administrators of the sample programs were also invited to share their thoughts on the relative helpfulness of the services provided by their respective programs, their sense of the higher priority services, and their thoughts on the services they would implement or expand upon if they had more resources. Administrators were personally interviewed at least once during the Study process and in several cases there were multiple interviews. In addition, each administrator of each of the sample programs (with one exception) responded to a survey instrument in which they rated the services on several scales.

Each administrator scored the services offered by their respective programs according to their perception of the relative helpfulness of the services. Table 28 contains a summary of the responses based on a scale of 1 to 10 (10 is the equivalent of *Absolutely Helpful* and a score between 6.7 and 10 is the equivalent of *Mostly Helpful*).

Table 28. Program Administrators' Opinions Regarding Relative Helpfulness of Programs' Services

Service	Relative "Helpfulness" Score
Encouragement and/or Provision of Dual Enrollment/Dual Credit Courses	10.0
Development of Study and/or Specific Academic Skills	9.6
P-12 School-to-College Transition Activities	9.4
Early Information about Preparing for College	9.2
Academic Counseling/Advising	9.1
Participation in Cultural/Social/Co-curricular Educational Activities or Events	9.0
Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation	8.8
Tutoring/Mentoring Activities	8.3
Family Involvement	7.2
Financial Aid (provided by the program)	5.8

As the table illustrates, administrators generally gave the relative helpfulness of services higher scores than former program participants. There also appears to have been some favor given services offered by their own particular programs. Tutoring/Mentoring services, Family Involvement, and Financial Aid (provided by the program) were rated at the bottom of both participants' and administrators' lists. While the order of the other services varies somewhat between the two lists, they rank as at least *Mostly Helpful* in both lists.

Another way of gaining an insight to the administrators' opinions of the importance of the services involved asking the administrators to indicate the three highest priority services—from first through third. The service nominated by 11 of the 17 administrators, but which received the most Priority One votes and, therefore, the most glowing overall recommendation, was *Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation. Early Information about Preparing for College* received the next most weighted consideration, followed by *P-12 School-to-College Transition Activities* (which was the most frequently mentioned of all but at a lower priority level than the preceding two). Other services that were well regarded, in order of the weighted score they received, were *Development of Study and/or Specific Academic Skills* and *Academic Counseling/Advising.*

The program administrators were also asked which services they would most likely increase in emphasis if their program had additional resources and there were no negative implications for the number of students they could serve. In this rendition of priorities, *P-12 School-to-College Transition Activities* was most often mentioned and was uniformly voted a 'high likelihood' of having the emphasis increased. This front-runner was followed in a tie vote by *Assistance with College Admissions, Financial Aid Applications, or Placement Test Preparation* and *Early Information about Preparing for College*. *Academic Counseling/Advising, Family Involvement Activities,* and *Development of Study and/or Specific Academic Skills* were ranked next in order of their likelihood of being implemented or enhanced if additional resources were available.

In addition to the opinions of the Texas program administrators that have been examined in this Study, a major, national evaluation of the federally sponsored Talent Search program also provides insight on the matter of effective services. Over 260 directors of Talent Search programs provided their opinion of program activities that they thought contributed most to the achievement of program objectives. Most frequently mentioned by these professionals were *Financial Aid Services* followed closely by *Campus Visits*. Other services that were noted were *Tutoring, Assistance with Postsecondary Applications, Career Counseling, Academic Advising,* and *College Orientation Activities.*[94]

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[94] U.S. Department of Education, Office of the Under Secretary, Policy and Program Studies Service. Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation. Washington, D.C., 2004. Chapter 6, pages 113, 116, and 120. http://www.ed.gov/rschstat/eval/highered/talentsearch/talentreport.pdf.

RECOMMENDATIONS

Appropriately designed and timely interventions in the educational pipeline can yield positive results in terms of greater college participation and success for those students served. Based on the evidence reviewed in this Study, a plan of action is proposed that, if implemented in the context of other changes now occurring in Texas' P-16 education system, holds the promise of significantly improving the educational attainment of a substantial fraction of the Texas student population.

A significant consideration implicit in these recommendations is the cost associated with their implementation. The higher educational 'gaps' in Texas are sufficiently large enough that for an intervention plan to be measurably successful, it must be able to be implemented on a similarly large scale to have a chance of actually closing those gaps. There are several program models that have been examined that appear to be very effective, but the total costs of which would be prohibitive. Fortunately, there are also good models to build upon that are less costly.

The approach that is recommended here involves utilizing services common to several Texas outreach programs in concert with a more focused effort on the part of certain public schools that may be targeted as most in need of the intervention. A key to the effectiveness of any such effort will be intervening as early in the educational process as is practical, and sustaining the effort through the students' high school graduation and beyond.

It is recommended that the state foster intervention programs, beginning at the 7th- 8th grade levels, incorporating at least the following six essential services in a manner that combines the resources and strengths of both the state's P-12 schools and Texas institutions of higher education. If additional resources are available, schools should also incorporate complementary co-curricular activities in their plans.

- Essential services to be provided should include:
-
    - Early information about the benefits and availability of and the path to higher education;
    - Academic counseling/advising, particularly the necessity to follow the preparatory path of at least the Recommended High School Program, and more with respect to math;
    - Development of study/academic skills;
    - P-12 school-to-college transition activities and experiences;
    - Assistance with financial aid and admission applications and processes, and entrance test preparations; and
    - Dual credit/concurrent enrollment opportunities.

To better enable students to take the four key steps to participation and success in postsecondary education, intervention programs should involve: elements of several existing outreach programs provided by various colleges and universities, a rigorous high school curriculum, certain duties of Financial Aid Officer positions (including provision of Career Centers) successfully employed by several Texas high schools, and dual/concurrent enrollment programs.

A recommended *Postsecondary Readiness, Participation, and Success Plan* is proposed that envisions:

- Collaborative planning on the part of public schools and institutions of higher education to foster a culture that anticipates and prepares for postsecondary educational participation and success and provides for the means to achieve such ambitions;
- Early intervention, beginning with recruitment in the 7th grade;
- The provision of the six essential services identified above;
- A proposed administrative framework that combines the resources of local public schools and the colleges and universities in a collaborative manner;
- Accountability that would be a joint responsibility of the Texas Education Agency and the Texas Higher Education Coordinating Board.

Some elements of this proposal are already in place in some schools and many local efforts are complemented by the *CollegeForTexans* initiative (and its *Mobile Go Centers*) fostered by the THECB and by enrollment initiatives, such as the *College Connection* instituted by Austin Community College. The proposed *Plan* contemplates a more universal and formal application of these services, taking advantage where possible of initiatives already in place.

If such a *Plan* were successfully implemented, it is estimated that it would yield economic benefits that would greatly exceed anticipated costs, as well as other tangible and intangible benefits for generations to come.

POSTSECONDARY READINESS, PARTICIPATION, AND SUCCESS PLAN

Recommended Elements of a Model *Plan*

- Each high school would be charged with developing a local *Postsecondary Readiness, Participation, and Success Plan* that is consistent with the plans and requirements of HB 1, 79th Texas Legislature, 3rd CS and the goals and objectives of the Texas Higher Education Plan, Closing the Gaps by 2015.

- A model *Plan* for a high school would incorporate objectives (among others deemed appropriate) that address the development of:

    - Career goals for all high school students and postsecondary education plans that support those career goals.
    - Academic skills, incorporating at least the completion of the state's Recommended High School Program, which are necessary for postsecondary educational success for those who aspire to earn a college certificate or degree, encouraging the taking of honors level courses for middle school students and Pre-AP and AP and dual/concurrent enrollment courses for high school students, and creating additional academic momentum by taking a fourth year of science and math (beyond Algebra II).
    - Knowledge on the part of participating students of other requirements of and challenges to postsecondary participation and the skills they need and actions they must take to succeed.

- Development of the model *Plan* would be coordinated by a high school's *College Counselor,* who would develop the *Plan* subject to direction from the principal and appropriate district administrators and with the participation of the high school guidance counselors and appropriate higher education partners. To address the objectives of the model *Plan*, it would incorporate services to be provided through a collaborative venture involving one or more participating institutions of higher education and the P-12 high school and associated middle schools. Participating middle and high schools would provide necessary classroom and office space, as well as assistance with other overhead costs/services for direct service personnel for which there are no other provisions. The *Plan* would also identify other outreach and/or intervention resources (local, statewide, national; such as Gear Up, Talent Search, AVID, etc.) that could be incorporated into the initiative.

- The *Plan* would involve early intervention in middle school, directed to rising 8th graders. Students would be recruited in the 7th grade to begin

active participation in the 8th grade. All rising 8th grade students in the middle schools would be invited to participate in the program. In grades 9-12, participating students would engage in various career and, as appropriate, college preparatory activities. It is envisioned that each participating student would take part in *Plan* activities, either in group or individual sessions, at least once every 4 to 6 weeks during the school year.

- *The higher education institutional partner to the Plan* would be the primary provider of outreach services to the rising 8th graders, recruiting them to the program and providing the special services envisioned in the *Plan* for 8th graders. These services would be provided by a *Higher Education Outreach Counselor* and would continue for the participating students at least through the 9th grade year, facilitating the transition from middle school to high school.

- *The high school/district partner to the Plan* would collaborate with the higher education partner to provide a transition of services for 9th graders and would be the primary provider of the services envisioned in the *Plan* for those participating students in the 10th through the 12th grades. These services would be coordinated through the office of the *College Counselor*. Higher education institutions would be invited to assist with various aspects of these services, particularly with college campus visits, summer camps, and the financial aid and college application processes to be completed in the 12th grade year.

- For students committed to the goals and objectives of the *Plan* that involve earning a college certificate or degree, parents and students would be asked to sign a Participation Agreement that indicates that continued participation in the program depends on their commitment to:

    - *Strive* to maintain a *B* average in overall coursework in grades 8-12.
    - Attend school on a regular basis.
    - Enroll in and complete at least the Recommended High School Program.
    - Exhibit appropriate behavior and a cooperative attitude.
    - Attend all *Plan* meetings and functions.

- It is recommended that the Texas Education Agency and the Texas Higher Education Coordinating Board provide support and direction to local *Plan* participants. The TEA and THECB should jointly implement an accountability system to track students' progress through the state's P-16 institutions, including high school to college linkages, and conduct an ongoing assessment of progress toward the goals and objectives of the state and local *Plans.*

- It is recommended that schools and institutions of higher education that participate in *Plans* that achieve the plan goals be appropriately recognized.

- It is recommended that the Texas Legislature provide the funds necessary to implement the *Plans.*

Selected Aspects of the Model Plan, by Student Year

- Key elements of the students' 7th grade year would include:

    - Recruitment and commitment to the objectives of the program.
    - Counseling to take Pre-Algebra, if not Algebra I, in the 8th grade.

- Key elements of the students' 8th grade year would include:

    - Taking Pre-Algebra or Algebra I.
    - Exploration of career and postsecondary education opportunities, with guidance from the Higher Education Outreach Counselor(s).
    - Completion of a workbook(s) such as a *College Planning Guide for 8th Grade* that takes students through topics such as goal setting, school success, study skills, time management, social skills, self-esteem, leadership development, preparation of a high school academic plan, and finally, how to spend a productive summer after school concludes for the year. These activities would be accomplished in a collaborative manner involving both the higher education outreach and school counselors.
    - Taking at least one *Plan*-sponsored visit, during the school year, to a nearby college campus and, as resources permit, participation in the summer following the 8th grade in an academic enrichment camp culminating in an overnight visit to a college campus.

- Key elements of the students' 9th and 10th grade years would feature:

    - Enrollment in at least the Recommended High School Program and pre-AP courses, where appropriate.
    - In the 9th grade, assistance to students would be provided with the transition from middle school to high school through the continued involvement of the same Higher Education Outreach Counselor who had intervened in the 8th grade, through a joint effort of the Outreach Counselor and the high school's *College Counselor*. The 9th grade workbook(s) would take students through such topics as *Making the Transition to High School: a College Preparatory Checklist*. Also, information about study skills and test taking

strategies with handouts on test taking skills, study skills, evaluating study skills, and time management would be provided. Career exploration (and associated exercises), college exploration to allow students to consider different characteristics when choosing a college, discussions about leadership skills, an introduction to financial planning for a college education, and an introduction to college entrance exams would also be integral parts of the 9th grade agenda.

- In the 10th grade, students would be encouraged to take the various college entrance practice exams offered to sophomores (i.e., the PLAN and PSAT tests). The 10th grade workbook would explore many topics similar to those contained in the 9th grade workbook, including, particularly, hints about exploring career and postsecondary educational opportunities.
- Students would make at least one *Plan*-sponsored visit to a college campus each year while in high school.

- Key elements of the students' 11th grade year would include:

  - Maintaining enrollment in at least the Recommended High School Program.
  - Successfully completing at least two Dual/Concurrent Enrollment or AP courses (or combination of the two).
  - Preparing for and taking the PSAT/NMSQT, SAT and ACT tests.
  - Exploring college choices and obtaining catalogs, financial aid information and other reference materials with assistance from the *College Counselor* and high school guidance counselors.
  - Attending college fairs.
  - Searching for financial aid and scholarship opportunities; attending local Financial Aid Night event(s).
  - Begin preparing essays for college and scholarship applications and soliciting letters of recommendation. (This could be accomplished as an assignment in English classes.)
  - Taking AP Examinations.
  - Visiting college campuses and taking advantage of available college summer camps.

- Key elements of the students' 12th grade year would include:

    - Maintaining enrollment in at least the Recommended High School Program and taking a fourth year of Science and Math at a level higher than Algebra II.
    - Completing at least two Dual/Concurrent Enrollment or AP courses (or combination of the two).
    - Narrowing college choices.
    - Formalizing career and postsecondary plans.
    - Confirming all financial aid and college application deadlines.
    - Obtaining teacher, counselor and other letters of recommendation; completing college admissions essays; and completing and filing college and scholarship applications.
    - Taking the SAT I, SAT II, if applicable, and the ACT.
    - Attending college fairs.
    - Completing the Free Application for Federal Student Aid (the FAFSA) as soon as possible after January 1.
    - Watching for college acceptance notices and important deadlines for housing, orientation, etc.
    - Making plans to enroll in college sooner rather than later (i.e., at least by the fall following high school graduation) and trying to take a full course load, at least for the first year. (Students who do not delay enrolling in college after high school tend to have greater success in earning college degrees.)
    - Taking AP Examinations.

Suggested Actions and Resources Needed to Implement the Local *Plan* (Other than the High School Instruction Program)[95]

- For the P-12 Schools

    - Adopt the suggested objectives for the model Local *Plan.*
    - Create, in each high school, the position of *College Counselor,* to coordinate the school's/district's efforts to encourage and enable more of the schools' students: 1) to establish clear career and postsecondary education goals and 2) to prepare for and obtain the postsecondary education necessary to achieve those goals (See Appendix G).
    - Assign the necessary resources to the *College Counselor* (See Appendix G).
    - Negotiate P-16 partnership arrangements with one or more public institutions of higher education to develop and implement the *Plan*.
    - Allow for school-related absences for college visits.

- For the public institutions of higher education

    - Negotiate P-16 partnership arrangements with one or more public school districts/high schools.
    - Participate in the development of the Local *Plan(s)* and adopt, as appropriate, elements of the *Plan* that involve the institution.
    - Create a staff position(s) for the *Outreach Coordinator* and assign the necessary resources to implement the Local *Plan(s)* as suggested in the Ideal Budget for a *Texas Higher Education Outreach Coordinator* (See Appendix G).
    - Provide for greatly discounted college application fees for participants of <u>*any*</u> local *Postsecondary Readiness, Participation and Success Plan*.
    - Provide Dual Credit/Concurrent Enrollment opportunities without tuition charges for partnering school's students.

- For Texas communities

    - Support a college-going culture that raises academic expectations and values college aspirations.

[95] Appendix G contains a recommended ideal budget to support these recommendations, sample job descriptions, and an analysis of the benefits/costs associated with these recommendations.

APPENDIX A

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

LITERATURE REVIEW

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

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INTRODUCTION

This Literature Review is a revised assessment of a previous review of published materials pertinent to the Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs. As noted in the earlier edition of the Review, it builds upon work previously done by or for the Texas Higher Education Coordinating Board.

The earlier work also included several chapters discussing the Texas Higher Education Plan and the challenges facing Texas, as well as an overview of what had been learned through the review. This rendition presents only the individual abstracts of the articles, studies, and other works uncovered in the course of this Study. The main body of the report of this Study entitled Meeting the Challenge: Creating College Opportunities for More Texans, discusses much of this material in the context of the Study and, therefore, does not bear repeating here.

"Closing the Gaps by 2015: The Texas Higher Education Plan." Texas Higher Education Coordinating Board. October 2000. 21 pp.
http://www.thecb.state.tx.us/reports/pdf/0379.pdf

Texas' *Closing the Gaps* plan "is directed at closing educational gaps within Texas, as well as between Texas and other states." Described in this document are the four most critical goals the state of Texas wishes to achieve by the year 2015. These goals for Texas higher education include: increasing student participation, student success, excellence, and research. The plan consists of strategies for reaching each of the goals and targets against which to measure the state's annual performance.

The plan notes that the population of Texans enrolled in institutions of higher education does not reflect the overall population of Texas in terms of ethnicity. Higher education enrollment rates of Hispanics and African-Americans have been well below White enrollment rates. This disparity is particularly notable when viewed in the context of the rapid growth in the Hispanic population. By 2008 Hispanics will account for 40 percent of the population, while African-Americans will represent 11 percent, and Asian-Americans 4 percent. The plan states that the rates of higher educational enrollment and success must rise more rapidly than ever to avoid a decrease in state educational levels and to accurately represent the population of Texas.

Texas' higher education enrollment rate is 5 percent. The national average is 5.4 percent. When compared to the top ten most populous states, Texas' higher education enrollment rates fall below the rates of states such as California, Illinois, Michigan, and New York. The first goal of the *Closing the Gaps* plan, increasing student participation, is directed at lifting Texas' current overall enrollment rate of 5 percent to 5.7 percent by 2015. To achieve this set goal, Texas must enroll approximately 500,000 additional students in higher education by 2015. The enrollment rate of Hispanics must increase from the current 3.7 percent to 5.7 percent by 2015 to achieve this goal. Similarly, rates for African-Americans must increase from the current 4.6 percent and White rates must increase from 5.1 percent by 2015.

To ensure that this goal is met, the authors set forth a plan which has several elements. One pertains to adoption of the Recommended High School Program (i.e., college preparatory courses) as the standard public high school curriculum in Texas and to make it a prerequisite for admission to Texas public universities by 2008. Such a recommendation also requires that additional qualified educators be recruited for elementary and secondary schools in the subjects required for the Recommended High School Program (i.e., math, science, foreign language, and technology). To ensure that the Texas population is fully aware of the value of higher education and its attainability regardless of socioeconomic status, a sustained statewide public awareness campaign is recommended for

implementation. The document also states that the number of grants and scholarships administered by the state should be increased and college tuition should be monitored for affordability. According to the planners, students at every level (pre-school through high school) should be taking steps to prepare for college. This requires that public education and higher education work together to build P-16+ informational, motivational, and academic programs that prepare students for higher education.

To close the gaps in success for Texas the planners specify that the number of Texans completing bachelor's degrees must increase from 57,000 to 104,000 by 2015. This accomplishment will place Texas' participation rate above the national average; however, to accomplish this, Hispanics and African-Americans must earn bachelor's degrees in proportion to their share in the state's population. The authors estimate that African-Americans must increase completion of degrees and certifications from 9,000 to 16,000 by 2015. Hispanics must increase degree and certification completion from 18,000 to 50,000 by 2015.

To achieve this goal and to encourage more Texans to enter teaching and technology related fields, the higher education community must form partnerships with elementary and secondary education communities as well as business communities. According to the plan, improvements to the recruitment, preparation and retention of students will be made by providing a college preparation continuum from pre-school through college. By carrying out the state's Uniform Recruitment and Retention Strategy which was designed to identify, attract, enroll, and retain students in higher education that represent the multicultural population of Texas, diversification of the Texas professional workforce will ensue and role models for future minority students will emerge. In addition, funding to colleges and universities that sustain quality programs with high retention and graduation rates should increase. The authors also note that students should be assisted in a seamless transition through every level of the Texas public education system to promote their continuation to the next level.

To close the gaps in excellence, the state plans for each public college or university to identify one or more programs or services to improve to a level of nationally recognized excellence. In this way the state seeks to "substantially increase the number of nationally recognized programs or services at colleges and universities in Texas." Also, peer institutions should be identified and excellence benchmarks should be implemented to close the gaps in excellence.

To close the gaps in research, the plan is to elevate the amount of funding accessible to Texas institutions by 50 percent to $1.3 billion from federal science and engineering research funding. The strategy for this goal is 1) to allow universities to absorb all overhead income for contracts and grants, 2) to enact the Texas Science and Engineering Collaborative to expand research through institutional collaboration, and 3) to develop research and research capacity at

emerging research institutions, especially in current and projected major metropolitan areas.

"Texas Higher Education Coordinating Board Literature Review." Prepared by Wirthlin Worldwide. Texas Higher Education Coordinating Board. 30 June 2002. 32 pp.

In an effort to increase the number of students who are prepared to attend and succeed at post-secondary institutions, the Texas Higher Education Coordinating Board commissioned a study *to investigate the optimum methods of communicating about higher education* to students of all ages and their parents. Wirthlin Worldwide (http://www.wirthlin.com) organized this literature review for the Texas Higher Education Coordinating Board. As stated by the authors, the ultimate goal of this literature survey was the investigation of available information to formulate informed questions for quantitative research.

Chronicled in the report were the various barriers to college attendance as found by the authors in their review of the literature. Although the factors that pose a barrier to college attendance are often correlated, the authors reported the five factors listed as independent issues.

1. Actual and perceived financial burdens that a college education imposes disproportionately affect students from disadvantaged backgrounds.

2. More than other groups, youth from lower socioeconomic backgrounds tend to view college education as a needless drain on newly earned income or as a delay in establishing a separate household, marriage, children, etc. According to the authors, it is important that the value of a higher education be properly understood by high school students and their influencers. Some young adults opt for immediate financial gains instead of a college education that would allow for greater gains in the future because the value of a college education has not been made clear to them.

3. The authors indicated that when support from influential figures is absent, especially the immediate family of the student, the inclination to attend college is lessened. Although parental involvement varies considerably and tends to diminish as children progress through high school, studies have shown that young adults admit to seeking out their parents first when deciding on post-high school plans. Other studies show that children from single parent households tend to have lower college aspirations. The cultural and familial pressure to work or marry early, which is especially prevalent in families without previous college attendants, is also incongruent with plans for college. As stated by the authors, another integral personal influence in a teenager's life is his/her peers. Lack of the college-going mentality in a

student's friends tends to negatively affect that student's college aspirations. Communities with a concentration of low-income and historically underrepresented populations often lack the presence of successful role models for the surrounding children to emulate. To further exacerbate the problem, studies have shown that another significant personal influencer, the educator, may set lower standards and expect less from students who they determine are not likely to go to college. According to the literature reviewed by the authors, this educational bias disproportionately affects minority students.

4. When assessing the likelihood of a student attending college, the authors found that socioeconomic and/or demographic characteristics of a student account for a large portion of the variation. Socioeconomic status (SES), ethnicity, gender, and geographic location were included in the focus of the authors.

    A. Research has found that African-American and particularly Hispanic high school students have a significantly greater chance of dropping out of high school before the 10th grade compared to Caucasians or other minority groups. On the other hand, research has also demonstrated that African-American and Hispanic students who persevere through the 10th grade have higher educational aspirations than their Caucasian counterparts. The authors stated that those high aspirations abate after this point due to the barriers that plague historically underrepresented college populations. The correlation between minority group membership and lack of family experience in higher education, language barriers, low-quality elementary and secondary schools, low socioeconomic status, lack of social and cultural capital with regard to higher education,[1] and specific cultural norms that resist higher educational attainment can all be used to explain the gaps in the college enrollment rate for such historically underrepresented minority groups.

    B. In terms of gender, the authors noted that women take more responsibility for child rearing; the determination of when to begin a family has a greater influence on a woman's plans for education. The authors also stated that because of possible differences in the way women and minorities experience schooling and work environments, different perceptions about earning

[1] Social and cultural capital, as used by the authors, stands for the information and assets which permeate throughout a culture.

power and education level achievement may be formed in women and minorities.

C. The authors identified students from rural communities as also less likely to obtain a higher education. Rural community members are often less informed about college due to the lack of college-preparatory resources in local schools. The jobs available in rural communities often do not require a college degree and rural youth are not as exposed to college-educated role models. Rural peer groups, for various reasons (i.e., fear of losing group members), tend to discourage college aspirations and institutions of higher education are often located far from rural communities.

5. The present secondary education system poses numerous barriers to populations historically underrepresented in higher education.

A. This report indicated that counselors in Texas attest that large counselor-student ratios prelude some students from receiving the attention necessary for effective career counseling. In addition, many students, particularly minority students, are victims of a high school counseling technique which groups students by abilities (a.k.a. tracking). Oftentimes African-American and Hispanic students are forced into tracks that prohibit exposure to college-preparatory classes and, as a consequence, these students will not be prepared for higher education.

B. Under-prepared teachers and teachers with lower expectations of students from historically underrepresented groups in higher education pose a barrier to forming a college-going mentality within such student groups.

C. The authors perceived that a disproportionate amount of low-income African-American and Hispanic students are not enrolled in courses that sufficiently prepare them for four-year colleges and universities. The authors noted that this is especially the case in low-income school districts where sometimes the most gifted students fail to have access to a curriculum that challenges, inspires, or prepares them for college. The authors suggested that the teaming up of parents and

schools to support students' academic endeavors may reverse the problem of such ill-preparedness.

D. The multitude of tasks that require completion during a student's senior year can be daunting for even the most informed student but, according to the authors, an under-prepared student may be overwhelmed by his/her lack of knowledge concerning the necessary preparations for college. Stated in the report was the authors' assertion that it is the "general lack of statewide college preparation curricula in public schools" (11) that lead to the lack of students' preparedness regarding college entrance requirements.

E. Research conducted on the tendency of historically underrepresented students to score lower on the SAT and ACT than their Caucasian and Asian counterparts suggests that such test scores are correlated with a student's socio-economic status. Critics argue that such tests are culturally biased and students from low-income households cannot afford the preparation courses; therefore, the critics identify the SATs and ACTs as unfair barriers to historically underrepresented students.

F. Knowledge of the college application process and all of the activities that lead up to application and subsequent college enrollment are not generally known by the student population, especially by low-income students. According to the authors, the application process as a barrier could be combated by disseminating information directly to parents, educators, and teens to help them overcome the barrier that the application process can pose.

After the authors thoroughly explored the various barriers to higher education, they then reviewed the factors that function as motivators for college attendance. Presented in the report were the factors for motivation classified into four major categories:

1. Stated first by the authors was their finding that a college-going influence from parents and peers contributes to an accrual of college-going attitudes in students. Experts said that although African-American and Hispanic students face numerous barriers to higher education and attend college at a lower rate than their

Caucasian and Asian counterparts, more parents of African-American and Hispanic students view higher education as a "ticket to the American Dream" (13) than parents belonging to other ethnic groups. The authors cited well-regarded educators and peers as playing a large part in whether or not a student develops a college-going mentality as well. Noteworthy of mention in this abstract is that in a study amongst high school students, 45 percent of high school juniors already had an initial idea of their intentioned career path; therefore, the authors suggested that the crucial time to motivate students to pursue higher education is between the ages of 13 and 14.

2. When a student has an accurate understanding of the value of education the authors assert, the student will be more likely to pursue a post-secondary degree. According to a survey done by Wirthlin, four integral issues around which both parents and teens desired to build a career were "finding something they liked to do, the potential to make a good living, good health benefits, and a good, secure retirement plan" (15). When a student realizes that a college education is the key to a job with these and other benefits, the likelihood of enrollment is increased, according to the authors.

3. Participation in high school activities, especially for minority students, has been stated by some observers to increase the likelihood of educational success in high school and beyond by fostering a culture of support and belonging in students who might otherwise be excluded. Athletic activities, in particular, have been pointed out by observers to facilitate increased levels of motivation and greater psychological stimulation in relation to other activities.

4. Taken from a study of high-achieving Hispanic students, the following were listed as crucial, cross-cutting motivational factors:

   - Positive, communicative relationships with key adult figures such as parents, educators, and counselors, concerning the importance of education and an individual's potential
   - A sense of participation in the determination of one's own future along with key adult figures
   - High academic expectations of students from key adult figures
   - Educators who respect the culture and heritage of students
   - A good rapport with high school counselors

With commentary, ideas, hypotheses, and suggestions from academics, communications specialists and experts on their campaign team, the authors presented the tactics and strategies already in use to increase higher education enrollment. A key driving force behind any plan to increase higher education enrollment, as stated by the authors, is the need to emphasize that college is "necessary, possible, accessible to all, and attainable" (18). By describing interesting jobs to students and presenting college as a way to become more informed, experience new ideas, broaden horizons, and learn problem-solving skills along with reasonable ways to finance a college education, the authors provided specific tactics for improving post-secondary enrollment for historically underrepresented students.

Noted by the authors was the limited amount of significant evaluative data published about college outreach programs in general and the difficulty in evaluating school-centered college outreach programs. The authors of this report documented only student-centered programs. The programs reviewed by the authors were characterized by the following principles:

1. The program acts as a bridge from a historically underrepresented student's family/community life to higher education.
2. The program implements strategically timed interventions.
3. The program provides comprehensive strategies for overcoming the barriers to higher education rather than single-component strategies.
4. The program is sustained over a period of years.
5. The program is integrated with K-12 schools.
6. Some of the effective components of the programs include:

    a. "Early information about preparing for college
    b. Family involvement
    c. Academic counseling
    d. Tutoring and mentoring
    e. Study skills and specific academic skills
    f. Transition programs and summer residential programs
    g. College admissions and placement test preparation" (20)

The authors included specific program case histories classified by location: rural- or urban-based programs.

RURAL-BASED MODELS		
NAME	*STRATEGIES EMPLOYED*	*RESULTS*
Rural Community College Initiative (RCCI)	• Scholarships • Workshops • Mentors • Video conferencing • Student support • College information	A three-year evaluation of RCCI found community partnerships with schools and businesses, academic preparation, and student support services to be the most effective program practices.
Gulf County College Counseling Project	• Scholarships • Workshops • Parent involvement • College information and campus visits	According to a four-year study comparing differences in percentages of program participants' high school attendance, dropout rate, graduation rate, and postsecondary participation, the program increased numbers over time.
College Reach-Out Program (CROP)	• Campus Visits • Academic Support	Attitude and self-esteem tests administered to program participants returned more positive scores than those of non-participants.
Rural Education Initiative at Edinboro State University of Pennsylvania: On-Track Program	• College Information • College Exposure • Mentors	Out of the 100 On-Track program participants ninety-five attended college.

URBAN-BASED MODELS		
NAME	*STRATEGIES EMPLOYED*	*RESULTS*
"I Have a Dream (IHAD) Program	• Scholarships • College Exposure • College Information • Support Services • Mentors	The graduation rates and college entrance rates found in two different case studies of IHAD projects were higher than the two respective control groups. The analysts attributed the success of the program mainly to the "supportive and long-term relationships formed between students and project coordinators."
Project Choice	• Scholarships • Academic Support • College Exposure • Mentors • Parent Involvement	Project Choice students entered college at a rate of 92 percent. In 1995, a cost-benefit analysis was conducted and demonstrated that each Project Choice participant would contribute $3 million more to the tax base than non-participants.

Quantum Opportunities Program (QOP)	• Scholarships • Support Services • Mentors	QOP participants graduated from high school, pursued post-secondary education, and excelled in academic endeavors at a higher rate than those in the control group.
Advancement Via Individual Determination (AVID)	• College Preparatory Courses and Un-tracking • Parent Involvement • Academic Support	In 1991, AVID was evaluated in a comparative study. The AVID participants were compared to all students from San Diego City Schools and AVID results were also compared to the national average. AVID students pursued higher education and enrolled in two- or four-year colleges at a higher rate than either the San Diego City School group or the national average. In 1995, another study was conducted using San Diego County students as the comparison group; AVID students completed college preparatory curriculum, attended college, and enrolled in four-year universities at a higher rate than San Diego County students.
Alliance for Collaborative Change in Education in School Systems (ACCESS)	• School Reform • Academic Support	When compared with statewide college-going rates, program participants' college-going rates were higher.
California Student Opportunity and Access Program (Cal-SOAP)	• Campus Visits • Academic Support • College Information	Cal-SOAP program participants enrolled in California colleges after high school graduation at a higher rate than their peers.
Middle College Program	• College Preparation • Career and College Information	When compared with statewide college-going rates, program participants' college-going rates were higher.
The Newark Faculty Alliance for Education and Systemic Educational Reform	• Partnerships • Mentors • Community Involvement	The student transfer rate from Essex County College to Rutgers University increased over a four-year period.

"URRS Reports for the Academic Year 2002-2003: Report on 2003 Submissions." July 2004. Texas Higher Education Coordinating Board: Division of Participation and Success.
http://www.thecb.state.tx.us/reports/PDF/0757.pdf

As part of House Bill 1678, signed into law by the 76th Texas Legislature in 1999, the Texas Higher Education Coordinating Board was directed to "develop and annually update a uniform recruitment and retention strategy to identify, enroll, and retain students that reflect the population of this state" (1). Under the Uniform Recruitment and Retention Strategy which is included in the Coordinating Board's *Closing the Gaps by 2015* plan, institutions of higher education are required to report annually their strategic enrollment management practices including recruitment, enrollment, and retention services. The participating institutions of higher education are required to ensure that their strategic enrollment plans enforce strong collaboration among academic affairs, student affairs, and other university offices which directly serve students. Reporting of the diverse strategic enrollment plans is now being made uniform so that the Coordinating Board can easily gather and then disseminate new and creative ideas for other Texas higher education institutions to consider for replication. Special attention has been given to recruitment programs that focus on Hispanic students.

The measures that Texas institutions of higher education are now required to report as an effect of the Uniform Recruitment and Retention Strategy include marketing plans, recruitment strategies, retention strategies, funding, update and progress towards goals, and data collection. In the report, the universities described target populations and enumerated the institution's major publications, programs, scheduled recruitment contacts, and methods for increasing the applicant pool in the section entitled "Marketing Plans". The recruitment ideas listed in the Uniform Recruitment and Retention Strategy section of the Coordinating Board website were implemented by many institutions to craft their own outreach programs; specifically, many institutions reported that efforts should be focused on recruitment through telephone interaction, written communication, web-based communication, face-to-face program opportunities in the local area, interaction with current students, alumni and others, in addition to campus visits, and exposure to printed recruitment materials.

The committee members indicated that a data management/student tracking system that allows campus offices to track and monitor university contact with potential students is essential to the success of any recruitment strategy and institutions were asked to list the type of data collection methods used to track student participation and success once enrolled. Institutions noted that campus atmosphere, student-friendly staff, and well-trained faculty knowledgeable in pedagogy and learning styles contributed to student retention. Each institution reported on its funding for specific *College for Texans* campaign activities, first-

generation student initiatives, and success/retention activities. The institutions were also asked to report on the stage of the progress being made toward the enrollment goals set in the statewide initiative, *Closing the Gaps*.

With regard to recruitment and retention, many higher education institutional plans implemented the following strategies that the committee members identified as the "best practices": institutional commitment in a financial capacity to an enrollment management plan, a professional support staff that is both trained and talented, student support services, pre-college programs, involvement of businesses and the community, and articulation agreements[2].

Some examples of the best practices that the committee members found throughout the reports on Uniform Recruitment and Retention Strategic Plans included *The Academy for Collegiate Excellence and Student Success (ACCESS)* at Prairie View A&M University, *Entering Student Program* at the University of Texas at El Paso, *Increasing the Success of the Most Economically Disadvantaged Students* at West Texas A&M University, and the *Rising Star Program* at Dallas County Community College District. The committee members noted that most of the successful programs concentrate on both recruitment and retention. These programs represent a myriad of effective approaches, but five factors were identified by the authors as common characteristics of each exemplary program.[3]

- Exemplary programs are geared toward increasing the numbers of minority students at their institution.
- Exemplary programs institute specific goals and provide an array of services to achieve their goals.
- Exemplary programs tend to be funded by both the institution and other external sources that demonstrate community support.
- Exemplary programs establish effective means of communication between the institution and the neighboring community schools, community colleges, and business leaders.
- Exemplary programs allow ease of replication by other Texas institutions of higher education.

The committee members also listed program practices that prove effective in bolstering the success of underrepresented students:

* "Extended student orientation
* Learner-centered teaching
* Curriculum that celebrates diversity
* Student success courses and bridge programs

[2] Standards at one educational institution will meet the standards at another institution for ease of transfer.
[3] Additional exemplary practices are enumerated on the THECB website. http://www.thecb.state.tx.us/ane/default.htm.

* “Early alert” systems
* Qualitative and effective advisement and counseling systems
* Access to faculty
* Academic support services
* Access to appropriate role models
* Institution-wide programs and activities that celebrate diversity” (14).

Successful program practices that the committee members recommended for continuation or future development include:

- College enrollment workshops for high school students in the local area
- Teaming up with high schools in the area to facilitate collaboration with high school teachers and counselors
- Offering summer bridge programs and first-year emphasis programs that cover student assessment, academic advising, mentoring, tutoring, and supplemental class instruction issues
- Granting work-study and internship opportunities with local employers
- Implementing classes to enrich study skills
- Student support group formation
- Providing access to equipment (i.e., laptop computers)
- Enhancing strategies to increase student-faculty interaction

The authors included a final suggestion to the Texas Legislature which was to consider funding a state-wide recruitment and retention success program based on the effective practices of the U.S. Department of Education TRIO programs.

Berkner, Lutz and Lisa Chavez. "Access to Postsecondary Education for the 1992 High School Graduates". National Center for Education Statistics. U.S. Department of Education. NCES 98-105. Washington D.C.: October 1997. http://nces.ed.gov/pubs98/98105.pdf.

Data for this analysis are contained in the second and third follow-up files of the National Education Longitudinal Study of 1988 which began with a nationally representative sample of eighth graders in 1988 who were followed up in 1990 (as 10th graders), 1992 (as 12th graders), and 1994 (as potential second year college students). The report focuses on the factors (financial needs, educational expectations, and college-going aspirations) associated with the relatively low four-year college enrollment rates of Hispanic, Black, and low-income high school graduates. The authors of the report also used what they called a four-year "college qualification index" to gauge student academic preparation to attend college. This college qualification index was comprised of five parameters, those being: high school GPA, senior class rank, an NELS 1992 aptitude test, SAT and ACT test scores, and the academic coursework undertaken at the secondary level.

"The specific focus [of this report] is on how differences in family income, parental education, and students' race/ethnicity are reflected in (1) enrollment in postsecondary education within two years of high school graduation; (2) the type of institution attended; (3) academic preparedness for admission to a four-year college; (4) taking the necessary steps toward admission to a four-year college; and (5) obtaining information about financial aid. A central issue is to what extent concerns about college costs and inadequate information about financial aid may deter low-income students from applying to four-year colleges and universities." (Berkner, et al., 1)

The major findings of the report are as follows:

- There are no identifiable differences in college-going rates between college-qualified (students who have met the minimum requirements to be admitted to a four-year college based on the "college-qualification index") students in low-income families and those in middle-income families.

- Low-income students who demonstrate minimal qualifications for admission to a four-year institution, i.e., taking of the college entrance exams and submitting an application for admission, can attend college at the same rates as middle-income students.

- Low income students who are "college qualified" and have been accepted for admission to a four-year institution are just as likely to enroll there as are students from middle and high income families.

- Low-income, Black, and Hispanic high school graduates are less likely to be academically prepared to succeed in college.

- Low-income, Hispanic students, even those with adequate academic qualifications, are less likely to take the college entrance exams and apply for admission to a four-year institution.

- Hispanic students are the least likely to enroll in postsecondary education of all college-qualified students.

- College-qualified Hispanic students are more likely to enroll in a public two-year institution.

- The proportion of all students who ultimately enrolled in higher education is a direct reflection of economics – 64 percent of low-income, 79 percent of middle-income, and 93 percent of high-income students attended college by 1994.

- Approximately 80 percent of low-income high school graduates who enrolled in college received some form of financial aid. Two-thirds of low-income students worked while enrolled in college for an average of 24 hours per week.

- Students from different economic status categories had differing expectations of finishing college: 59 percent of low-income students expected to finish; 76 percent of middle-income students expected to finish; and 92 percent of high-income students expected to finish college.

The National Center for Education Statistics (NCES) is the primary federal entity for collecting, analyzing, and reporting data related to education in the United States and other nations.

Berkner, Lutz, Shirley He, and Emily Forrest Cataldi. "Descriptive Summary of 1995-96 Beginning Postsecondary Students: Six Years Later". NCES 2003-151. U.S. Department of Education. National Center for Education Statistics. Washington, D.C. December 2002. http://nces.ed.gov/pubs2003/2003151.pdf.

This study reports on the enrollment, persistence, and degree attainment of students who began postsecondary education for the first time in the 1995-96 academic year. It follows the students for a 6 year period and provides information about the rates of degree attainment, transfers to and between different institutions of higher education and rates of students who left higher education without attaining degrees. This report differs from some of the traditional reports of student progress that are from an institutional perspective and measure student outcomes at the institution first attended.

This report focuses on the enrollment, persistence, and completion rates of students anywhere in higher education. Over the six years of the study, 40 percent of the students were enrolled in at least one other institution than the one in which they first enrolled. Approximately one-third of the students transferred from their first institution to a different one and 11 percent were, at times, co-enrolled in more than one institution. Roughly 25 percent of the students who began at 4-year institutions and 42 percent who began at public 2-year institutions transferred during the six year period.

For beginning students in this postsecondary study, the largest proportion of students (46 percent) enrolled at public 2-year institutions, 26 percent started at public 4-year institutions, 15 percent at private 4-year institutions, 10 percent at private for-profit institutions (vocational education) and 3 percent at all other types of institutions.

During their first year in college, approximately 50 percent of the students at public 2-year colleges stated that they intended to attain an associate's degree; another 25 percent intended to transfer to a 4-year college and complete a bachelor's degree. Of the 75 percent of students who started at a public 2-year institution and who intended to complete either an associate's or a bachelor's degree, 31 percent did so within 6 years (23 percent completed an associate's degree and 13 percent completed a bachelor's degree). These percentages include the 5 percent who completed both. Among those who transferred to a 4-year institution, 36 percent attained a bachelor's degree within 6 years of starting community college.

For beginning students at 4-year institutions in 1995-96, 51 percent completed a bachelor's degree within 6 years at the first institution attended. However, if you include those students who transferred out of their first institution, the percentage

of beginning students completing a bachelor's degree within 6 years (at any 4-year institution) increased to 58 percent.

Among those students who began their postsecondary education at a 4-year institution and had a bachelor's degree goal, the percentage who left the first institution and transferred to a different one was 10 percent by the end of the first year, 18 percent by the ending of the second year (including the first year leavers), 22 percent by the end of the third year, and 23 percent through the end of the sixth year (there were fewer transfers in years 5 and 6).

Beginning first year students with a bachelor's degree goal completed a degree at their first institution within 4 years at a rate of 34 percent with another 21 percent finishing in 5 to 6 years for a total of 55 percent finishing a bachelor's degree at their first institution within 6 years of starting there. Those students who began at a private 4-year institution were more likely to complete their bachelor's degree at that institution than those who began at a public institution (65 percent) and were more likely to have finished in 4 years (52 percent).

Students who did not transfer to another institution, were enrolled full-time, or were enrolled continuously without a break had higher 6 year completion rates (72-74 percent) than other students, and about 45 percent graduated within 4 years.

Students who were well prepared academically prior to college entry had higher completion rates than other students. Roughly 80 percent completed a bachelor's degree within 6 years and more than half (55-61 percent) graduated within 4 years. Hispanic and Black students had lower completion rates than White and Asian/Pacific Islander students.

Several risk factors have been identified that categorize students at risk of not completing a degree program. Two of the most recognized factors are part-time enrollment and delaying entry into college after high school graduation. Other factors mentioned are not having a regular high school diploma, having children, being a single parent, being financially independent of parents, and working full time while enrolled. Students with none of the risk factors mentioned above are considered highly traditional students – they enroll immediately after high school graduation, they attend full time, they are financially dependent on their parents, and they work part-time or not at all while enrolled. Students who began their education at 4-year institutions in 1995-96 were predominantly traditional students.

Students who graduated with a bachelor's degree in 4 years were well prepared when they entered college. More than 50 percent had received mostly A's in high school or had SAT scores in the highest quartile of college freshman (56 percent) and 30 percent had taken two or more AP courses.

Students who began their college careers at public 2-year institutions were more likely to be non-traditional students than those at 4-year institutions. Almost 50 percent of students beginning at a 2-year institution had delayed their start in college and about 50 percent had two or more risk factors when they began.

Ingels, S.J., M. Planty, and R. Bozick. "A Profile of the American High School Senior in 2004: A First Look – Initial Results from the First Follow-up Longitudinal Study of 2002 (ELS:2002) (NCES 2006-348)". U.S. Department of Education. National Center for Education Statistics. Washington. D.C.: October 2005. http://www.nces.ed.gov/pubs2006/2006348.pdf.

"This report profiles the American high school senior of 2004 using data from the Education Longitudinal Study of 2002 (ELS:2002), the most recent secondary school longitudinal study conducted by the National Center for Education Statistics (NCES). ELS:2002 began with a nationally representative sample of 10th graders in public and private schools in the United States in 2002. The 2002 sophomore cohort was surveyed again in the spring of 2004 when most of the sample members were high school seniors." (Ingels, et al., 1)

The report highlights two of four aspects of the high school seniors in the spring term of their final year of high school in 2004 that are particularly relevant to this study of college-going behavior of the students. The first is the proficiency of the nation's high school seniors in mathematics. A second aspect is the educational expectations of the high school seniors in terms of post-secondary schooling.

13,420 high school seniors were surveyed out of a population of approximately 3 million public and private high school seniors in 2004.

With respect to the proficiency of high school seniors' performance in mathematics, the following progressively complex levels were defined and used to differentiate proficiency: (1) simple arithmetical operations with whole numbers; (2) simple operations with decimals, fractions, powers, and roots; (3) simple problem solving, requiring an understanding of low-level mathematical concepts; (4) understanding of intermediate-level mathematical concepts and/or multistep solutions to word problems; and (5) complex multistep word problems and/or advanced mathematical material.

Mastery of these levels of mathematical complexity for this senior cohort illustrated the following outcomes:

- Among the senior cohort, college-going educational expectations were associated with higher levels of math performance.
- However, 63 percent of seniors who expected to earn a four-year degree and 47 percent of seniors who expected to earn a professional degree did not exhibit a mastery of level 4 proficiency performance.
- Thirty-two percent of seniors who expected to earn a four-year degree and 20 percent of seniors who expected to earn a professional degree did not master level 3 proficiency.

In terms of expectations relative to the amount of higher education these seniors were likely to attain, the following points were illustrated:

- Approximately 69 percent of the senior cohort expected to complete college with a four-year or higher degree.
- Eighteen percent expected to complete a two-year postsecondary program or at least attend college.
- Fifty-eight percent of the seniors with higher math test scores expected to earn a four-year or higher degree.
- Thirty-eight percent of seniors with higher math scores expected to earn a professional degree

The report highlights the differences in postsecondary expectations of students from different socioeconomic backgrounds. The following table summarizes these differences.

America's High School Seniors by EXPECTED Level of Educational Attainment and Selected Student Characteristics, Class of 2004[4]

Characteristic	Attain At Least a 4 -Year College Degree	Don't Know
Total	**68.5%**	**8.4%**
Race/Ethnicity		
Hispanic	57.0%	13.5%
Black	67.4%	8.8%
White	71.0%	7.0%
Parents' Education		
High School or Less	51.8%	11.5%
Some College	65.0%	9.0%
College Graduate (4-year)	78.6%	6.2%
Graduate/Professional Degree	86.0%	5.6%
Socioeconomic Status		
Lowest Quartile	50.8%	12.1%
Middle Two Quartiles	66.4%	8.8%
Highest Quartile	86.6%	4.6%

[4] U.S. Department of Education. National Center for Education Statistics. A Profile of the American High School Senior in 2004: A First Look—Initial Results From the First Follow-up of the Education Longitudinal Study of 2002 (ELS:2002) (NCES 2006–348). by Ingels, Planty, and Bozick. Washington, DC: 2005. http://nces.ed.gov/pubs2006/2006348.pdf.

Choy, Susan P. "Students Whose Parents Did Not Go to College: Postsecondary Access, Persistence, and Attainment". (NCES 2001-126). U.S. Department of Education. National Center for Education Statistics. Washington, D.C.: December 2001. 34 pp. http://nces.ed.gov/pubs2001/2001126.pdf.

There is a significant difference in college enrollment rates for students whose parents have varying levels of educational attainment. "In 1999, 82 percent of students whose parents held a bachelor's degree or higher enrolled in college immediately after finishing high school. The rates were much lower for those whose parents had completed high school but not college (54 percent) and even lower for those whose parents had less than a high school diploma (36 percent)." (Choy 3) The author of this study presents data to support this analysis by utilizing the following longitudinal studies conducted by the NCES:

- The National Education Longitudinal Study (NELS), which studied a cohort of 1988 8th graders every two years until 1994, two years after most of them finished high school and then again in 2000.
- The Beginning Postsecondary Students Longitudinal Study (BPS), which included students (of all ages) who enrolled in postsecondary education for the first time in either 1989-90 or 1995-96. The first group was surveyed again in 1992 and 1994, and the second group in 1998.
- The Baccalaureate and Beyond Longitudinal Study (B&B), which conducted follow-ups on 1992-93 bachelor's degree recipients in 1994 and 1997. (Choy 4)

In looking at 1992 high school graduates, 27 percent of these students were from families in which neither parent had any postsecondary education. These students were more likely to be Black or Hispanic and fall into the lowest income quartile.

Among these 1992 high school graduates whose parents had no postsecondary educational experience, 59 percent of these students had enrolled in some form of postsecondary education by 1994. This enrollment rate increased to 75 percent among those whose parents had some college experience, and to 93 percent among those whose parents had at least a bachelor's degree. (Choy 7) Graduates whose parents did not attend college were about twice as likely as their peers whose parents had attained a college degree to be enrolled in a public two-year institution.

The author states that there are five steps on the path to college that all students must complete somewhat sequentially. These are:

- Aspire to attend college and decide what type of institution is appropriate to meeting their career goals

- Prepare academically in high school for college-level work
- Take the ACT and/or SAT examinations
- Choose one or more institutions and submit an application(s)
- Gain acceptance and make financial and other arrangements that are necessary to enroll

Students whose parents did not attend college were less likely than their peers whose parents did attend college to complete each of these steps. First of all, they were less likely to aspire to attend college (46 versus 86 percent) and even if all steps are completed, they were about a third as likely to enroll in a four-year institution (21 versus 65 percent) as their peers whose parents attained a bachelor's degree.

Lack of academic preparation prior to college enrollment is closely related to a lack of success for those students who ultimately enroll. Forty-nine percent of students whose parents did not attend college were labeled "marginally or not qualified" for admission to a four-year college based on the rigor of their public school curriculum course taking. This percentage is in contrast to students whose parents had at least a bachelor's degree (15 percent "marginally or not qualified"). High school mathematics course taking is strongly correlated to success in college and is also related to parents' educational attainment. Seventy-six percent of 1992 high school graduates who took advanced academic mathematics in high school had enrolled in a four-year institution by 1994. Among high school graduates who had achieved the highest level of mathematics proficiency tested in the 8th grade, those whose parents did not attend college were much less likely than those whose parents had bachelor's degrees or higher to take algebra in the 8th grade (34 versus 55 percent). They were also much less likely to complete any advanced mathematics in high school (63 versus 83 percent). (Choy 14) However, even for those first generation students who took advanced mathematics in high school there was still the likelihood that they would not enroll in college as compared to their peer cohort whose parents had at least a bachelor's degree (64 versus 85 percent).

Parental involvement, or lack thereof, in students' curricular choices and their decisions to go to and apply for college acceptance is related to their parents' educational attainment level. Students whose parents did not have any postsecondary educational experience were less likely to choose a rigorous high school career path or to report that their parents assisted them in applying for the SAT/ACT, choosing a college to apply to or helping with financial decisions relating to college matriculation. Forty-two percent of students whose parents had a high school diploma or less reported that they had discussions with their parents regarding their postsecondary plans. Sixty-one percent of students whose parents have a bachelor's degree or higher reported that they discussed their postsecondary plans with their parents.

Considering the group as a whole, first generation students appear to begin college less academically prepared than other students. For students whose parents have a high school diploma or less, only nine percent reported that they undertook a rigorous high school curriculum. For students whose parents had at least a bachelor's degree or higher, 25 percent reported that they undertook the more rigorous academic curriculum.

Overall, 16 percent of students who began their postsecondary education in a four-year institution in 1989-90, left before their second year. (Choy 22) First generation students were about twice as likely as those whose parents had bachelor's degrees to do so (23 percent versus 10 percent). In addition, first-generation students were less likely than others to return to a four-year institution once they left.

After three years at a 4-year institution, only about half of those students whose parents had no postsecondary education were still enrolled compared to 67 percent of those students whose parents had bachelor's degrees and 87 percent of those whose parents had advanced degrees. (Choy 25)

After five years at a 4-year institution, first generation students were less likely than other students to have earned a bachelor's degree (13 vs. 33 percent), about as likely to have earned an associate's degree (13 and 14 percent, respectively), and more likely to have earned a vocational certificate (18 vs. 9 percent). First generation students were also more likely than others to have left college without a degree (45 vs. 29 percent). (Choy 26)

Warburton, Edward C., Rosio Bugarin, Anne-Marie Nunez. "Bridging the Gap – Academic Preparation and Postsecondary Success of First-Generation Students". NCES 2001-153. U.S. Department of Education. National Center for Education Statistics. May 2001. 83 pp. http://nces.ed.gov/pubs2001/2001153.pdf.

"This report examines the high school preparation and postsecondary persistence of first-generation students – those students whose parents had no education beyond high school – and compares them with students whose parents went to college". (Warburton, et al., iii) The authors focused on a subset of 1995-96 beginning college students who started their postsecondary education in 4-year institutions, examining three criteria: grade point averages (GPAs) in college, the number of remedial courses taken in college, and the rates of persistence of the students once in college.

Generally, first-generation students were found to not undertake as rigorous[5] a high school curriculum as students whose parents have a bachelor's degree (9 percent vs. 20 percent, respectively). (Warburton, et al., iv) First-generation students were less likely than their peers with degreed parents to take college entrance examinations. Those first-generation students who took these exams were more likely to score in the lowest quartile of scores (40 percent vs. 15 percent). (Warburton, et al., v)

First-generation students were also found to have lower first-year GPAs than students whose parents had a college degree (2.6 vs. 2.8) and were more likely to have taken at least one remedial course during their first year of postsecondary education (21 percent vs. 10 percent). (Warburton, et al., v) However, of the students who did take rigorous coursework in high school, 95 percent of the first-generation students reported taking no remedial courses during their first year, compared to 97 percent of students whose parents had earned a bachelor's degree (Warburton, et al., v). And, first generation students' average first-year GPA was 3.0 which was no different from the average GPA (3.1) of their non-first-generation counterparts with similar academic preparation (Warburton, et al., v).

First generation students, generally, were less likely to be enrolled continuously or to attain a degree at their initial postsecondary institution than students whose parents completed college (60 percent vs. 73 percent). They were also more likely to have stopped out or left their first institution of enrollment than their peers whose parents had a college degree (19 percent vs. 8 percent). These

[5] A rigorous curriculum is defined in this report to include: 4 years of English, 4 years of math (algebra I, geometry, algebra II, precalculus), advanced science (biology, chemistry, and physics), 3 years of foreign language, and one honors/Advanced Placement course or Advanced Placement test score.

differences disappeared, however, among students who took rigorous high school courses. In this case, first-generation students were as likely as students whose parents had a college degree to be continuously enrolled or to have attained a degree in June 1998 (87 percent vs. 86 percent). (Warburton, et al., vi)

In conclusion, the study supports the idea that rigorous academic preparation in high school narrows the gap in postsecondary success between first-generation students and their peers whose parents graduated from college.

Espindola, Laura. "What Influences First Generation Latino College Students to Enroll in Institutions of Higher Education". August 2003. MA thesis. California State University-Long Beach. Ann Arbor: UMI, 2004. 1416756.

Laura Espindola wrote this thesis for the purpose of learning what factors influenced the decision of first generation Latino students to attend college.[6] The author states that minority students encounter barriers to academic progress at a higher rate than their mainstream counterparts. The author further stated that as a consequence of this disproportionate lack in academic progress, minority students are hindered in their social, cultural, and economic mobility. As a student of the Department of Social Work at California State University, the author stated that "it is essential that we as social workers identify and break down those barriers that are persistent in the lives of underrepresented groups" (2). By focusing on first-generation Latino students, the author addressed the issue of methods in which social workers could most effectively bridge the gaps that stretch between families and the education system.

The author noted that educational attainment varies significantly across ethnic backgrounds. The different levels of academic achievement are often correlated to the barriers that students of different ethnicities face; according to the author, cultural capital, social class, language, parents' level of education, parental involvement, family composition, and teacher expectations are all factors that should be considered when assessing the barriers to academic achievement that students face. The author then described the circumstances particular to the Latino culture in terms of economic status, family composition, parents' level of education, first generation college-bound status, tracking, parental involvement, and language usage. The author also noted that the Latino population averages fewer years of school completed, lower high school graduation rates, and lower college graduation rates when compared to African-American, Asian, and White counterparts.

The author found that the poverty levels of Latino youth are three times higher than non-Hispanic White youth. Poverty-stricken children often receive a mediocre education and the funds are not available to provide resources for the academic stimulation necessary for student success. In 1993, 66 percent of Latino families had both parents present and in the same year the average number of children per Latino household was 4.3, almost twice the average number for the United States. According to the author, Latino households tend to

[6] The author defined first generation as a student who is the first member of the family to attend college and the author defined college as a four-year institution. Latino and Hispanic were terms used interchangeably by the author and both terms include people whose national and/or cultural origin includes the Spanish language and heritage from Mexico, Puerto Rico, Cuba, Central or South America, the Caribbean, and the Dominican Republic.

encompass family members from multiple generations, adding to their size. In a 2001 study, the author found that parental high school completion status heavily influences the educational attainment level of their children while a 1997 study indicated that a lower proportion of Latino parents had completed high school in comparison with non-Hispanic White parents. Inappropriate assessment measures and misdiagnoses of learning disabilities lead to a higher proportion of Latinos being tracked into remedial courses or courses that meet only the minimum requirement for high school graduation according to the research perused by the author. Also, research indicates that Latino parents often feel uncomfortable attending school functions due to communication issues, unfamiliarity with the American school system, and limited financial resources.

The author also noted that despite commonly held perceptions that working-class parents hold low aspirations for their children's education, the opposite is true; working-class parents place the same value on their children's education as middle- and upper-class parents. Familial communication and the socialization patterns of Hispanic families often differ from White middle-class families. The educational system is oftentimes biased towards the White middle-class methods of communication and socialization. While parents in both White and Hispanics families tend to be authoritative and strict, research found White parents to be more democratic and Hispanic parents to be less democratic in terms of parenting styles.

According to a paper published in 2000 by J.P. McConnell and a 2002 article published by B.K. Jan, first generation college students often have one or more of the following characteristics: Latino, low income, speak a language other than English at home, have lower SAT scores, female, and comparatively older. The motivation for earning a college education differs when comparing students of first generation status with students whose parents had some college education. First generation students cited the influencers/reasons for pursuing a college education as follows: to gain respect/status, to make family proud, to help out their family financially, to remain with friends who are going to college, to fulfill parental expectations, persuasion from a high school counselor/teacher, to achieve personal goals, to be productive in society, to provide a better life for their children, or to gain autonomy.

The author used a questionnaire characterized by the Likert-type[7] scale to measure the degree to which students felt that the factors indicated on the questionnaire influenced their decision to attend college. The author included one open-ended question at the end of the survey inquiring as to other factors the students might offer as influencers on their decision to attend college. In the summary of findings that the author collected for fifty-two first-generation Latino students, she found that the reasons these students gave for desiring a college

[7] The Likert-type scale uses words such as "strongly agree", "moderately agree", "moderately disagree", and "strongly disagree" to measure the relative degree that the factors in the questionnaire influenced students' decision to attend college.

education were consistent with the reasons given in the literature review. That is, the author found in her study that parental involvement and personal goals including the desire for a good job, economic mobility, and the ability to give more opportunities to their own children influenced the respondents' decision to attend college. In addition to the large influence that parental encouragement and the availability of funding had on the decision of the respondents to attend college, the author found that over half of the respondents claimed that their decision to attend college was influenced by a school counselor. Also, the author mentioned that about 60 percent of the respondents were positively impacted by some sort of school outreach program (i.e., Upward Bound, early academic outreach, etc.).

Due to the fact that the study conducted by the author was only a cross-sectional study, the results are only indicative of this particular sample of students at one particular point in time. The author also cautioned that because of the small sample size of the study and the fact that the students were drawn from only first generation Latino students involved in two student organizations, "the results should not be generalized to the entire population of first generation Latino college students" (41). Included in the student questionnaire were only the influences that family, school, and personal aspirations exerted on the students' decision to attend college. The author noted that other institutional factors could have had an impact on the students' decision to attend college. As a recommendation for future studies, the author suggested that a longitudinal, time series study that focuses not only on micro level factors, but macro level factors as well should be conducted for more conclusive results.

Borman, Geoffrey D., Laura Rachuba, Sam Stringfield. "Advancing Minority High Achievement: National Trends and Promising Programs and Practices." Johns Hopkins University Center for Social Organization of Schools. February 2000. 102pp.
http://www.collegeboard.com/research/pdf/minorityhig_3948.pdf

The National Task Force on Minority High Achievement, an organization that develops recommendations to increase the number of academically successful minority students, commissioned a study to provide information concerning the proportion of under-representation of minority students among high academic achievers during the primary years of school.[8] In this report, the authors discuss the current advancements regarding the academic success of elementary-age under-represented students, possible reforms that support increasing the educational achievement of minority students, and characteristics, both academic and personal, that identify high achieving minority students.

The researchers focus their evaluations on the continual academic endeavors of Latino and African-American students who have high educational standards. Analyses were based on data from the national studies, *Prospects* and *Special Strategies.*[9]

In a review of previous literature the authors found that achievement gaps between minorities[10] and white students have widened among student cohorts born after 1978. The literature review reveals that as minority students proceed through the education pipeline achievement gaps may widen. Although current educational reforms and policies encourage "academic excellence for all students", the authors note that these policies and reforms do not promote minority students' academic success. The proportion of white children is expected to decrease in the next fifteen years, while the proportion of minority children will increase; thus, it is important to understand the reasons why minority students do not appear to have the opportunities and support to achieve academic excellence.

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[8] The authors define high achievers as those students who were scoring at or above the 50th and 75th national percentiles on the baseline Prospects tests (note: A description of the Prospects data will be given). In addition, the authors consider the initial school years as 1st grade through 6th.

[9] The Prospects study was conducted over a four year period, 1990-1994. The samples were selected using a three-stage, stratified design with districts as the first stage units, schools within the districts as the second stage unit, and students as the third stage unit. The researchers focused on four cohorts which consisted of first and third graders. There was no information about the purpose of the study or the results. The Special Strategies study was the companion study to Prospects. Its purpose was to design and assess ten strategies for educating at risk students.

[10] The authors state that most of the research they used for their own research focuses specifically on African-American students. However, the authors note that the findings also pertain to Latino and other students of color.

In terms of poverty, the report documents that attending high poverty schools and being economically disadvantaged impedes the academic success of minority students. Data from the *Prospects* study indicated that African American and Latino students are over-represented within high poverty schools[11] and under-represented within low poverty schools. In most cases, low achieving minority students come from more economically disadvantaged backgrounds, while high achieving minority students are more economically advantaged. According to the authors, high achieving minority students usually attend more advantaged schools compared to their lower-achieving counterparts. Previous research has shown that schools located in disadvantaged communities attended by minority children receive less funding compared to schools in suburban communities attended by advantaged White peers. In addition, sources argue that children who live in impoverished conditions have less access to formal learning opportunities, fewer resources to meet their needs, greater health problems, and developmental delays (Borman, et al. 3).

The authors note that cultural differences in children's' schooling environments contribute to the educational inequities that minority children encounter. At times, educational institutions attempt to assimilate minority children into the mainstream which contradicts many aspects from their home/community environment. Such assimilation leads to stress, confusion, and adjustment problems.

Researchers conceptualize poor academic performance of minority students as the outcome of academic disengagement from school. This begins as early as the first grade.[12] When analyzing gender, researchers found that boys were more likely to disengage from school over time compared to girls. According to the authors' literature review, minority students' low achievement is a result of how they are treated educationally, socially, politically, and economically (Ogbu 1985). If a student is met with low motivation or encouragement for academic participation and achievement they are more likely to disengage from school. To improve minority student achievement and engagement, researchers Montgomery and Rossi (1994) suggest that schools encourage students' involvement and interest in school-related activities (Borman, et al. 4). Similarly, parents, teachers, and peers who provide encouragement are also a positive incentive to minority academic success.

The authors also found that social factors play an important role in undermining minority students' academic success. The authors note that many social barriers reside within the confines of the classroom, in particular teacher behavior and teaching methods. Other researchers have documented that minority students

[11] A school is classified as high-poverty/impoverished if 75 percent or more of the students receive free lunches.
[12] This result was true for all low achievers of all ethnicities.

are exposed to prejudicial or discriminatory teacher behaviors.[13] Examples include being called on less frequently and, when called on, being given less time to respond, being criticized more often, being praised less, receiving less positive attention, and being disciplined more strictly. Due to actions such as these, minority students, specifically African-Americans, believe that they have to work harder to succeed compared to their non-minority peers. In addition, previous research has shown that negative outcomes of minority achievement based on instruction are associated with teachers' low expectations. Indeed, when minority and White students receive similar methods of instruction, they attained comparable academic achievements. Also, 'traditional' instruction for under-represented students assumes that poor academic success is a result of the students' learning abilities and their ethnic background. Minority and disadvantaged students are mainstreamed through techniques that by many are "assumed" to be correct but are actually unfocused. Examples of techniques used are sequenced curricula, drill and repetition, tight control by the teacher, and emphasis on basic skills remediation. Some sources suggest using instructional methods such as teaching for "meaning" or multicultural education as an alternative to "traditional" education. Teaching for meaning presents students with the tools they need to be proficient in higher-order, basic skill areas.[14] Similarly, multicultural instruction allows teachers to deal with students' backgrounds as well as implement curricular materials that reflect their interests.[15]

The authors provide a description of six reforms that hold promise for increasing the proportion of high achieving minority students. The Comers School Developmental Program is implemented in elementary and middle schools. The focus of the program is to improve educational institution resources to complement the developmental needs of disadvantaged children in urban areas. The program assumes that its goal can be accomplished by promoting community involvement as well as addressing the emotional and social needs of children. Results indicate that the program has demonstrated improvements in school climate, in students' behavior, achievement, attendance, and self concept. Similar to Comer, SFA (Success for All) focuses on the individual child. It is an intervention program designed to prevent students from falling behind in school. SFA offers reading tutors, a reading program, periodic assessments, a program facilitator, and advisory committee. Cooperative learning strategies are also implemented. Evaluations of the program reveal that students had higher reading performances compared to students who were not in the program. Most importantly, previous research indicates that this program has had a more pronounced effect on minority students than non-minority students.

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[13] These prejudicial or discriminatory attitudes are in some cases unintentional. Previous research has shown that teachers, specifically White teachers, have lower expectations for African American students than for White students.
[14] These skills include: mathematics, reading, and writing instruction.
[15] Both methods emphasize student-centered learning.

Unlike the Comer program, the Paideia Program has been implemented in elementary, middle, and high schools. The program works on improving a student's cognitive skills through a variety of activities. These activities, as reported by the authors, result in critical thinking, interpersonal, and communication skills. Core Knowledge, a sequential curriculum, allows students to build on their existing knowledge from year to year. Its focus is to provide equal access to knowledge for all students, advantaged and disadvantaged. Researchers found this program to have significantly increased students' longitudinal achievements in four out of five schools where it was implemented. The Calvert School, on the other hand, is a curricular reform that focuses primarily on the entire school. This program places a strong emphasis on student generated work. The program implements an intense writing program that exhibits the expectation of revision until there are no errors. Evaluations revealed that students who participated in this program scored at, or well above, national norms for achievement tests in reading, writing, and math. The Title I project enables school districts to use their money more flexibly to improve student achievement.[16] In order to be eligible for this project, 50 percent of the school population must be impoverished.[17] The districts can use their funds to hire additional teachers, provide staff development, obtain resources, develop extended day or extended year programs, or develop programs previously mentioned.

Based on their study and the literature review, the authors noted that academic barriers to minority high achievement, particularly those associated with schools and classrooms, are fixable. The authors considered the following as suggestions for increasing the academic success of minority students:

- "Greater emphasis on student-centered, advanced skills curriculum and instruction.
- Improved access to gifted and talented programs.
- Greater interaction with peers who share the same achievement ethic.
- Improved funding and availability of school resources.
- Greater racial and socioeconomic integration" (Borman, et al. xv).

[16] This is referring to all students, minority and non-minority.
[17] School districts are defined as impoverished if they are eligible for free or reduced lunches.

Antonio, Anthony L., Michael W. Kirst, and Andrea Venezia. "Betraying the College Dream: How Disconnected K-12 and Postsecondary Education Systems Undermine Student Aspirations." Stanford University Bridge Project. Stanford University. 2003. 72pp.
http://www.stanford.edu/group/bridgeproject/betrayingthecollegedream.pdf

Although students in today's educational system have high college aspirations, they are inadequately prepared for such a transition. This is evidenced by high remediation rates in college. According to the authors, inadequate preparation stems from the disjuncture between K-12 and post-secondary sectors. The disjuncture impedes under-represented students from making the transition from high school to college. Under-represented students usually undertake non-rigorous coursework and routinely suffer from a lack of post-secondary counseling in high school. This is typically followed by remedial level classes in college. The percentages of such students graduating from college are significantly low. This is particularly true for African-American (15 percent) and Hispanic (10 percent) students. The Bridge Project sets out to verify the cause of existing educational inequities in suburban, mid-level and urban high schools.

The Bridge Project is a six-year study that began in 1996 to support the development of policies to improve opportunities for all students to participate and succeed in higher education. This two-phase study examined:

- The relationships between K-12 and post-secondary education as they relate to student transitions from secondary to post-secondary education.
- High school students', parents', and educators' understandings of policies from secondary to postsecondary.

In Phase I the researchers focused on policies and practices in secondary schools and disjunctions between college admissions-related policies and K-12 reforms within six states. Researchers interviewed 165 people in California, Maryland, Illinois, Georgia, Oregon, and Texas from state education agencies, state-level K-16 committees, universities, and community colleges. From each state, the researchers chose one region and two four-year public universities (one more selective and the other less selective).[18] Researchers also selected two community colleges per region. Interviews were conducted with 15 administrators and faculty per institution while two student focus groups were conducted on each community college campus (Antonio, et al. 2003).

In the evaluation of Phase I, researchers discussed state policy level separation between K-12 and post-secondary education. The policy discussions included

[18] In Texas, the more selective 4-year institution was The University of Texas at Austin and the less selective 4-year institution was Southwest Texas State University (recently renamed Texas State University).

multiple and confusing assessments, disconnected curricula, and the lack of longitudinal K-16 data. Based on the interviews conducted with participants in Phase I, the post-secondary admissions and placement officials reported that they were unaware of K-12 standards and policies; similarly, K-12 educators were unaware of post-secondary admission and placement policies. Also, researchers found that differences in the content and format between assessments used at K-12 exit and college entrance levels resulted in uncertain expectations concerning what students need to know to be able to make the transition from high school to higher education. In addition, the researchers found several discrepancies between K-12 and post-secondary assessments. For example, high school assessments often stress different knowledge and skills compared to college and placement assessments. Within the participating states, the authors found that the curricula between secondary and postsecondary were not parallel (Antonio, et al. 2003). Texas was found to be the only state to have legislated curricular alignment across the two education sectors.[19] Researchers also found that no state could accurately determine their high school dropout rates. Furthermore, most of the participating states could not identify students' needs as they made the transition from high school to post-secondary education, or assess outcomes from K-16 reforms. Texas was the only state that was noted to have made progress since the project began. Texas is currently developing a K-16 data system, which will connect data across the primary, secondary, and post-secondary sectors.

The second phase of the project examined how post-secondary admission requirements and placement policies were communicated to, and interpreted by, students, parents, and educators in each of the six participating states (About the Bridge Project 3). For this phase, researchers conducted field research in twenty-four high schools across the six participating states. The high schools were selected based on several criteria such as test scores on statewide exams, percent of students enrolled in college prep courses, SAT/ACT scores, racial and ethnic diversity, percent free/reduced lunch, college-going rate, and involvement in K-16 reform. The researchers interviewed six to ten educators per school, conducted focus groups of honors and non-honors eleventh graders, and surveyed 2,013 ninth and eleventh grade students as well as their parents.

Also, in Phase II, researchers focused on how post-secondary standards and placement policies were communicated to and interpreted by students, parents, and K-12 educators. Findings indicated that the respondents were confused and frustrated with specific policies and practices (Antonio, et al. 2003). More than 50 percent of surveyed parents reported receiving information regarding higher

[19] The legislature has specified that the college preparation graduation plan will be the default curriculum for all public high schools by 2005. Students entering Grade 9 in the 2001-2002 school year and thereafter must complete the college preparatory curriculum unless the student, the student's parents, and the high school administration agree that the student be allowed to take courses under a minimum high school program.

education from their high schools. When analyzed by socioeconomic status, the less advantaged parents received about 30 percent less college information compared to their more advantaged counterparts. Based on student surveys, students were concerned that their K-12 education would not adequately prepare them for college. Educators interviewed also expressed concern about inadequate college preparation for students. Although a majority of students had college aspirations, they indicated that they were uncertain about the college preparation process such as testing, applying for financial aid and admission, and college curricula. Student surveys also indicated that student aspirations differed by school performance. Students in higher performing schools in Oregon, Texas, California, and Maryland tended to have higher aspirations compared to students in lower performing schools (Antonio, et al. 2003). Results showed that parents were more likely to advise their children about college than counselors or teachers.

The authors found that students' misconceptions of post-secondary education contribute to inadequate college preparation. Researchers found that students participating in the study believed a variety of misconceptions ranging from "I cannot afford college" to "Meeting high school graduation requirements will prepare me for college (Antonio, et al. 2003). Researchers used knowledge of curricular requirements, placement tests, and tuition at the studied institutions in the students' region to measure college knowledge. While a majority of the students surveyed indicated that they would attend college following high school, results revealed that their knowledge of particular college policies was limited. When analyzing data by states, "less than 12 percent of students surveyed knew all the curricular requirements for admission to the studied post-secondary institutions" (Antonio, et al. 2003). A greater proportion of higher socioeconomic students were more familiar with course requirements for admission to the more-selective institutions compared to lower socioeconomic students; the same result was evident for course requirements to less-selective institutions. Researchers found across all six states that less than 50 percent of the participating students knew the placement testing policy for the institutions in the study. Also, students within all six participating states overestimated the tuition at nearby institutions (both more-selective and less-selective). The authors concluded that overestimating the cost of college results in students and their parents assuming they cannot afford a higher education.

Another important finding the researchers highlighted was the inequitable college preparatory opportunities for students. According to the authors, a rigorous high school curriculum is a strong predictor of college success. Researchers found that students who are completing rigorous high curricula are more likely to receive more information about college preparation compared to their peers involved in other academic curricula. Findings indicate that the impact of a more rigorous high school curriculum on degree completion is more pronounced for Latino and African-American students. Furthermore, many students in advanced classes receive college information from a variety of sources; this is not the case

for students in middle and lower level high school courses (Antonio, et al. 2003).[20]

Inadequate counseling for students was noted as an impediment to college success. With the burden of responsibilities that counselors endure, little time is devoted to students' inquires and concerns about higher education. This results in decreased college access and inadequate preparation for some students. Across all six participating states, students reported that their counselors provide them with little assistance in terms of college information and policies.

Based on the results, the researchers suggested that to better support students in their efforts to succeed in college, states, K-12 schools and districts, and postsecondary institutions should:

- Ensure that students, their parents, and educators have accurate college preparation information.
- Examine the relationship between secondary and postsecondary assessments and standards.
- Expand successful dual and concurrent enrollment programs between high schools and colleges to include all students.
- Obtain collective data from all education sectors.
- Establish data standards.
- Ensure the availability of financial-aid, in particular, grants (Antonio, et al. 2003).

[20] Sources include content of courses, university recruitment efforts, their parents, counselors, other students, and teachers who are knowledgeable about college standards.

Gándara, Patricia and Deborah Bial. "Paving the Way to Postsecondary Education: K-12 Intervention Programs for Underrepresented Youth." NCES 2001-205. National Postsecondary Education Cooperative Access Working Group. U.S. Department of Education, National Center for Education Statistics. Washington DC: 2001. 145 pp. http://www.nces.ed.gov/pubs2001/2001205.pdf.

The authors of this document argue that higher education produces a happy, healthy, wealthy, and just society. Society is becoming increasingly composed of ethnic groups and social classes that have been historically underrepresented in higher education. The number of college preparatory programs targeting minority and low-income students is on the rise in an attempt to increase the numbers of these students attending college.[21] It is important to understand the reason why minority and low-income students are underrepresented in college in order to treat the problem effectively.

With regard to the opportunity to learn, this document describes numerous impediments systematically diluting the quality of education underrepresented students receive. The authors find that family background, including family income and parental education level, often determine school success. Although parents from underrepresented ethnic/racial groups "have uniformly high aspirations for their children" (Gándara Appendix A-2), the authors found, in a review of previous literature, that minority parents often do not have the cultural capital or social capital to leverage their child's school success.[22] The lack of such knowledge stems from the circumstances in which minority parents find themselves. Generations of minority families suffer from poor quality educational systems. The deficiencies such schools leave disable these groups from passing on sufficient cultural and social capital to their progeny. This "knowledge gap" contributes to the information handicap that underrepresented ethnic/racial groups face. The researchers find, in their review, that high educational achievement standards appear to be associated with differing parenting styles. For example, the parenting style predominant in high-risk urban environments may not support a child's classroom endeavors as much as the parenting style predominant in lower-risk suburban neighborhoods. According to the authors, another impediment to the opportunity to learn that minority, low-income, and immigrant students face is the fact that their families change residence at a disproportionately high rate. This residential mobility usually results in a change of school and, the researchers find, young children and adolescents are negatively affected by these school changes. Minority and low-income families'

[21] The authors note that the type of college (i.e., 2-year or four-year institution) students attend has an influence on how likely they are to complete a degree.
[22] The authors use cultural capital to refer to "knowledge of how the system works". Social capital is defined as "access to important school networks".

lack of knowledge about the postsecondary education system leads to a lack of guidance into college for capable underrepresented students.

The authors find that the setting a child grows up in could present an impediment to a child's opportunity to learn. This is also a much-debated issue in the literature. A few researchers argue that the lack of neighborhood/community resources could limit a child's learning opportunities.[23] Others contend that even when these resources are available, the lack of parental skills (cultural capital) for utilizing these resources inhibits the child's inclination to use them. Therefore, methodologically, the effects of neighborhoods and the effects of parenting on a child's opportunity to learn could easily become confounded. Others argue that adolescents themselves should not be characterized as high-risk, but that the settings in which they live and attend school should be considered high-risk.[24] Jessor (1993) argues that the total ecological context in which a child is reared should be a huge factor when considering the development of that child.

The researchers find that students tend to strive toward the average academic achievement level of their peer groups. The issue of academic achievement is complex among minority ethnic groups. According to experts, the opportunity for underrepresented students to learn could be negatively affected by peer pressure and adolescents are particularly susceptible to this phenomenon. Within college preparatory programs, effective fostering of peer groups with which minority students identify provides support for students with high academic aspirations. However, the researchers caution that schools must cultivate an environment where these relationships can flourish.

Claude Steele (1997), among other analysts, states that the attitudes of society at large still contribute to the barriers that minority and low-income students operate within. Mainstream society has a history of labeling certain minority groups as intellectually inferior. This opinion has been dampened over the years; still, the authors indicate that individuals from minority groups avoid or appear disinterested in competitive academic endeavors because "any mistake can be seen as an affirmation of the notion that they are intellectually inferior" (Steele Appendix A-5).

Quality educational institutions attract better-qualified teachers and produce higher-achieving students. These quality institutions are often located in affluent, suburban communities and a disproportionate number of urban, low-income and minority students do not have the benefit of attending comparable schools. Another contributor to a discrepancy in education that the researchers found is the 1996 dismantling of the busing program; schools are more segregated again. According to much of the literature, a large percentage of low-income and minority students suffer from "watered-down" curriculum, less qualified teachers,

[23] These community resources include: parks, libraries, and child-care facilities.
[24] Gándara (1995) found that successful Chicano students from low-income families had a tendency to live outside, or on the edge of, high-risk communities.

over-worked/ ill-equipped counselors, and generally lower expectations. Many reports from relevant literature describe the effects that teacher expectations can have on students. Subtle, discouraging signs from teachers in the classroom unduly limit student performance.[25]

Minority and low-income students drop out of high school at a much higher rate than either white or Asian students. As noted by the authors, the likelihood of disadvantaged students associating with confirmed high-school dropouts and/or employment interfering with schoolwork, for example, are contributing factors to dropping out. By dropping out of high school, a barrier to attending an institute of higher education is erected.

The final impediment to underrepresented students' opportunity to learn, as outlined by the authors, is financial stress. Too often, financial constraints impede low-income minority high school graduates from ever opting for college. Attending college means passing up employment opportunities that could supplement family income. At the same time, the debt accrued with student loans is seen as a burden to both the student and his/her family.

K-12 intervention programs for underrepresented youth act to combat the average state of minority and low-income students' education level by increasing their college going rates. The authors identify how college preparatory programs address each of the educational impediments faced by underrepresented students by reviewing selected programs. Florida's CROP program provides parents with methods of easily accessing student records and informs parents about techniques for supporting their children's' college entry efforts. Mentoring also bridges the information gap that minority and low-income families face with regard to the college system. Programs rooted in the community, such as Puente (CA), help students to fully utilize and navigate community resources. Puente also promotes student pride in Hispanic culture. By including Hispanic literature in college-preparatory English courses, program coordinators hope to dispel the stereotype that Hispanics cannot compete academically. AVID (CA & TX) and Posse (NY) invest in building strong peer groups that nourish healthy college-going attitudes. To confront inequalities in K-12 schools, programs such as Upward Bound and Neighborhood Academic Initiative (NAI) provide coursework to supplement school curriculum so that students will find themselves better prepared for college. Only Project GRAD (TX) works with the existing educational system to strengthen the curriculum. NAI (CA) attempts to decrease the negative effects of segregation by sending low-income and underrepresented students to school with privileged, white students. A large majority of the programs reviewed by the researchers provide some form of counseling. In particular, the Monterey Bay Education Consortium (MBEC) assigns a fourth grade student to a counselor who continues to monitor the progress of the child and remind the student of college requirements. To combat minority and low-income students' chronically low academic aspirations, AVID and Upward Bound

[25] This is termed "the Rosenthal effect".

regularly enlist motivational speakers. Although financial aid is often not the priority of these college preparatory programs, many provide information on how to win scholarships and apply for grants and loans. The goal of college preparatory programs is to bridge the population gaps of underrepresented students in college, especially of the four-year variety, but Posse "is unique among these programs in its almost equal provision of services both before and after college matriculation" (36).

The researchers found the most effective crosscutting program feature for catapulting underrepresented students into college to be a close, consistent relationship with a knowledgeable adult. It is the purpose of mentors and counselors to fill this role in most programs, but in a study of the I Have a Dream program, the researchers found that it was the long-term relationship with the program's director that launched most students' success. Long-term investment in students, challenging coursework, incorporating students' cultural background, supportive peer cohorts, and scholarship assistance also top these authors' list as the most important features of effective K-12 intervention programs for underrepresented youth.

Important to researching these college preparation programs is an understanding of their common shortcomings. Due to the voluntary nature of these programs, the attrition rate poses a great problem.[26] Critics point out that K-12 intervention programs may increase the number of underrepresented students attending college, but these programs do not create high performing students. While the programs under study here assist a selected group of underrepresented students, critics argue that the root of the problem is not being corrected. The large majority of intervention programs do not intervene with the very schools and environments that impede whole cultures of students. Project GRAD is alone in coordinating college preparatory efforts with K-12 and postsecondary education. The scope of Project GRAD encompasses restructuring education from kindergarten into high school, but even Project GRAD truncates its services during high school, failing to create a bridge of service into and through college. Additionally, most programs lack evaluative efforts aimed at increasing affectivity.

The authors provide short descriptions of 34 programs they reviewed. The organization of these programs falls along the lines of initial program sponsors: private nonprofit programs, postsecondary education–sponsored programs, government-sponsored programs, community-based programs, and K-12-sponsored programs. A few pertinent outcomes include the authors' report of program costs. The Neighborhood Academic Initiative in California costs about $2,000 per student. Due to the cost and the rigor of the program, service is limited.[27] For the select few underrepresented students, this program appears to cultivate high academic standards. While AVID (CA & TX) has not undergone

[26] The authors comment that Puente combats this problem by enrolling students into certain required high school courses; thus, stemming attrition.
[27] The bill for NAI is footed by university and private foundation grants.

rigorous evaluation efforts, program directors perceive increased rates of college attendance for participants and the cost per student amounts to only $625. Puente participants' attitudes towards college, rate of college matriculation, and amount of preparation benefit significantly when compared to non-Puente students. Puente operates in California and costs only $500 per student. Project GRAD operates in Houston, where reformation of the school is its overarching function. In this way, the program intends to prepare vast numbers of underrepresented students for college. Project GRAD requires substantial private funding to operate, but evaluators note that it serves 25,000 to 30,000 students, making Project GRAD a relatively low cost program per student. Florida's College Reach Out Program (CROP) underwent an evaluation that heavily supports the significance of a key adult figure in influencing college-going rates among underrepresented youth. Cost data for CROP is not included in this document.

"College Reach-Out Program Annual Evaluation: 2001 Cohort with 2001-2002 Post-Secondary Outcomes". Vol. 05. Florida Department of Education, Office of Equity and Access. December 2003. 24pp.

In this report, researchers analyzed the impact of the College Reach-Out Program (CROP) on its primary target groups: racial and ethnic minorities, low-income students, and educationally disadvantaged students.[28] The major objective of the CROP program is to increase the educational motivation and preparation of its target groups for post-secondary success. The program recruits students and provides them with academic activities and personal counseling.[29]

To analyze the data, researchers based their evaluations on the comparison of two different cohorts which consisted of 8,330 program participants and 9,979 public school students who were drawn from a random sample stratified by race and income.[30] Additional comparisons were made using a third cohort which consisted of all test-takers for the state-wide Florida Comprehensive Assessment Test (FCAT) and college readiness data. Similarly, researchers compared outcomes for past program cohorts, namely the 1998-1999 and 1999-2000 cohorts, to identify historical trends in the outcomes of program participants (Office of Equity and Access 2003).

Demographics of the 2000-2001 program cohorts reveal that students in 57 counties across Florida were served by CROP. Additional statistics indicated that African-Americans accounted for the majority of participants compared to only 13 percent White and 10 percent Hispanic. Examining data by gender, researchers found that female participants outnumbered males by about 20 percent. Almost 90 percent of new program participants were potential first generation college students while 79 percent originated from low-income family households.[31] Researchers found that the overall majority of the participants were eighth and ninth graders. High school students were the majority in the stratified sample compared to the program cohort. In terms of returning participants, 75 percent of students returned for the 2000-01 project year.

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[28] Educationally disadvantaged students are students who are most likely to drop out of high school.

[29] The only academic activities specified in the report were summer programs and field trips. There is also no specific information given about participants receiving personal counseling.

[30] The control cohort consisted of 6th to 12th graders who were selected from the Division of K-12 Public School's database. The CROP cohort was selected by grade whereas the control cohort was not.

[31] Authors defined low-income as incomes which are less than 185 percent of the poverty level.

In the two-way and three-way comparative analysis,[32] researchers found that the CROP cohort consistently outperformed the random cohort in measures of success which included:

- High school grade level promotion
- High school graduation
- College readiness[33]
- Participation in post-secondary education.

The researchers noted that this has been consistent over time. Researchers found that the random cohort received more 'need-based' financial aid compared to the CROP cohort. Results in terms of merit-based financial-aid revealed just the opposite. The CROP cohort failed to out-perform the state cohort in any of the above measures of success. Researchers also conducted a post-secondary longitudinal follow-up of the 1995-96 CROP and random cohorts. From the data, it was evident that a greater percentage of the CROP cohort had attended some type of post-secondary institution and received a degree by 2001-02 compared to students in the random cohort.[34]

In addition to the data analysis included in the report, the authors integrated findings related to the annual review of 2000-01 CROP based on project reports, workshops, and site visits. In the supplementary information presented by the projects, the author concluded that hands-on involvement of qualified CROP staff is the key to student development. Also noted was that parental involvement is crucial for program success. According to the authors, a majority of projects neglect this aspect of their program in part due to conflicts such as parents' work schedule, lack of transportation, cultural and language differences, and child care needs. They recommend that programs implement a multifaceted approach to maintain parental involvement focusing on having parents actively participate in activities.[35] According to the authors, summer programs and field trips provide CROP participants with educational enrichment and personal growth in diverse settings. This is also a great strategy to increase parental involvement. Other issues addressed were CROP scholarships and financial-aid and student performance on standardized tests.

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[32] The two-way comparative analysis was performed between the CROP cohort and the random cohort. The three-way comparison was done using the same cohorts as the two-way with the addition of the state-wide FCAT test takers cohort.

[33] The authors refer to "college readiness" in terms of the scores a student receives on the Florida College Placement Test.

[34] The report is unclear regarding whether or not the findings took into account the demographics of the random cohort, in particular gender. If the study did not control for demographic characteristics, it could undermine the validity of the findings.

[35] Activities include appointing or hiring a parent liaison, using multilingual parent coordinators or volunteers on staff, presenting door prizes or exciting guests at parent meetings, holding parent retreats at times that are convenient for the parents, and providing transportation and child care when needed.

Brandes, B.G., G.C. Hayward, M.W. Kirst, C. Mazzeo. "PACE Report – Higher Education Outreach Programs: A Synthesis of Evaluations". The Outreach Task Force Board of Regents, University of California. January 1997 (Last modified 20 November 1997).
http://www.ucop.edu/sas/publish/pace/

This report, by the Policy Analysis for California Education (PACE), was commissioned by the University of California System in an effort to increase University participation by historically disadvantaged or underrepresented students. Before 1995, the University factored a students' race or ethnicity into the admissions process but in July 1995 that policy was reversed. In 1996, the University established the Outreach Task Force charged with developing the most efficient recruitment and retention strategies for underrepresented students. In an effort to identify the most efficient and effective strategies, the Outreach Task Force commissioned this review of current outreach programs. The programs reviewed included University of California sponsored programs and others not sponsored by the University.

The intent of the authors was to determine criteria for effective and efficient programs and then assess whether current UC-wide programs have met these criteria for efficiency and effectiveness. Based on the qualitative and quantitative data received from the programs, the authors were charged with forming recommendations to improve both program strategy and program evaluation methods. The authors found over 800 current outreach programs involving a coalition between the University and K-12 schools; the authors point out quickly that the results they received were difficult to interpret and oftentimes the validity of such informal results was questioned.[36] The program evaluations reviewed in this report encompassed interviews and analyses of written documents.[37]

Incorporated in the report was a brief description of barriers to college access recurrent in the literature. For various reasons, historically underrepresented students experience a lack of information regarding college, receive less counseling and advisement, and often suffer due to under-prepared teachers. Critics also argue that tests such as the SAT are culturally biased and pose a barrier to historically underrepresented students. Tracking and ability grouping is a much-cited barrier to attending a four-year institution. Disproportionate numbers of Blacks and Latinos are put on a vocational or less-rigorous course

[36] The authors referenced The Schools and UC, a document published by The UC Office of the President, identifying each of the K-12 programs that the University is involved with.
[37] The evaluations included interviews with Outreach Task Force members, University administrative staff, outreach program directors and staff, and others. The written documents perused by the authors included two California Postsecondary Education Commission Reports on the Effectiveness of Intersegmental Student Preparation Programs, policy studies, dissertations, and a variety of other evaluations.

schedule that often includes remediation and omits algebra.[38] The authors cite cultural and familial pressures as well as the higher costs of college education as formidable barriers to post-secondary education. Recognizing that each of these barriers is significant individually, the authors asserted that cumulatively these effects have the potential to overwhelm historically underrepresented students. The conclusion drawn by the authors is that with these numerous barriers, outreach programs which treat only one barrier would be inadequate.

To further illustrate why disproportionate numbers of low-income and minority students are underrepresented in college, the authors describe the "narrowing pipeline" that is evident in the K-12 education system. Disproportionately high numbers of Latinos, Blacks, and low-income students have less access to pre-school, primarily due to financial stress difficulties. Since pre-school participation has been demonstrated to facilitate student success in the primary grades, the minority and low-income student groups tend to lag academically. Upon high school entrance, the gap between Black and Latino students and their White and Asian cohorts widens; simultaneously, the chances of admission to a four-year institution narrow for the former group. Once in high school, a larger proportion of Blacks and Latinos drop out when compared to Whites and Asians. As stated by the authors, large numbers of the Black and Latino group who do persevere tend to take less rigorous courses, rendering them unprepared for the admission process and under prepared to succeed once admitted to college. In light of this situation, the authors declared the need for a solution better suited to the huge scope of this problem.

The authors synthesized the evaluations of various outreach and college preparation programs with a concentration on the efforts implemented by the University of California. Over twenty-five years ago the University found, through a study, that inadequate academic preparation was the primary barrier to access and retention for underrepresented students. Based on these findings, the University launched programs to remediate the problem. The importance of early intervention has been addressed by the University's implementation of outreach programs as early as elementary school. The authors of this report found that the ways in which K-12 schools and the sub-systems of the University collaborated were highly varied. The authors suggested that the University's efforts would produce more favorable results within a consistent overall framework.

A list of the services provided by the student centered programs reviewed by the authors was included. All of the programs reviewed by the authors provided

[38] As stated in this document, algebra is the portal to the college preparatory mathematics curriculum.

some type of academic enrichment in addition to one or more of the services listed.[39]

- "Information and assistance in college admission
- Motivational activities
- Academic enrichment and support
- Counseling and advisement
- Parent and family involvement
- Transition programs" (Brandes, et al.)[40]

Remarked upon by the authors was the dearth, or lack, of evaluations that met the established criteria for a valid analysis. Without rigorous evaluative data, the authors based plans for future program strategies on the interviews they conducted, reviews of program documents, and evaluation reports. The authors heavily studied the findings of two reports composed by the California Postsecondary Education Commission (CPEC). While the CPEC reports provided abstracts of nine interrelated college outreach program evaluations, little conclusive evaluative data about the effectiveness of program components or strategies could be extracted by the authors of this review. However, according to the authors, the report did yield some information about program costs. For 1994-95, the average expenditure on outreach programs per student was $140.21; this number related an overall figure and the authors concluded that it would have been inappropriate, in this case, to compare costs across programs.

Student-centered programs, student-centered programs with financial aid, student- and school-centered programs, and simply school-centered programs were the four categories under which the authors chose to classify the reviewed programs. Presented in this report were only the programs that the authors believed were significant or distinct.[41] Of the strictly student-centered programs, the authors described three begun by the University: Early Academic Outreach Program (EAOP), Mathematics, Engineering and Science Achievement (MESA), and The College Readiness Program (CRP). EAOP remains one of the primary outreach programs implemented by the University of California. Unfortunately, methods of tracking students in this program were absent; therefore, evaluation of the program's most effective components and evaluation of the program's overall effectiveness could not be conducted. The University's College Readiness Program (CRP) functions at the middle school level and is managed

[39] Each heading listed is described with more specific services listed underneath. The authors were careful to point out that the list was not exhaustive and this classification method could be flawed due to varying interpretations of program service elements.
[40] Transition programs include intensive summer programs, as well as bridge programs from middle school to high school and from high school to college and other special program design elements involving the college environment.
[41] The programs mentioned by the authors either provided evaluation data or contained exemplary or noteworthy features.

conjointly between California State University and the California Department of Education. According to a study conducted by CRP, the program has increased the number of students who take college track courses with more significant results in mathematics than in English. To average-achieving students from historically underrepresented groups, CRP provides tutors who are CSU students trained especially for the program. CRP also provides college visits, motivational activities, and enrichment in problem-solving skills as well as parental information sessions. The authors noted that CRP was currently combining its tactics with those of Advancement Via Individual Determination (AVID), a similar but more comprehensive program.

The student-centered plus financial aid programs discussed by the authors included: California Student Opportunity and Access Program (Cal-SOAP), National Early Intervention Scholarship Program, the Federal Government, and the Liberty Partnership Program, New York. One of the reports from the CPEC shows that college-going rates for Cal-SOAP students were significantly higher than for a comparison group. The National Early Intervention Scholarship Program administers financial aid and student support in equal shares and the Liberty Partnership Program focuses on bolstering both students' and parents' information reserves about college as early as grade five.

Among the combination student- and school-centered programs, High School Puente, Alliance for Collaborative Change in Education in School Systems (ACCESS), the California Academic Partnership Program (CAPP), and Advancement Via Individual Determination (AVID) were pointed out by the authors. At the time of the report, it was too early to relate the effects of High School Puente, although a three-year study was being conducted on students who were ninth graders in 1994-95. Puente was noted by the authors due to the high number of Puente students who graduate from high school and attend a four-year institution. Puente also undertook the task of comparing the effectiveness of program components. Instructional components were deemed the most effective, while the mentoring segment displayed less effectiveness due to difficulties in implementation.[42] Evaluations of ACCESS have shown that the program increases participation in college-preparation courses and helps students meet college admissions criteria. CAPP functions as a curriculum-improvement program and the program administers grants to school districts that bolster partnerships between K-12 schools and universities. According to the authors, AVID faithfully replicates program functions as it expands its efforts to increase the population of historically underrepresented students in college. Comparatively, AVID has conducted serious program evaluations and the results are extremely positive.

[42] The program evaluators determined that increased efforts should be devoted to the program components which help parents learn how to effectively assist their students on the road to college.

The authors recorded their observations about the essential principles of student-centered programs.

- Building peer-support groups in student-centered programs displayed positive effects for college entry and success in underrepresented groups.
- Strategically timed interventions contribute considerably to the success of student-centered programs.
- Student-centered interventions which address multiple barriers to college entry instead of just one appear more effective.
- Student-centered interventions sustained over a longer period of time show more effectiveness.
- When well-integrated with K-12 schools, student-centered outreach programs are more effective.
- Certain student-centered program components seem to be more effective:

    - "Early information about preparing for college
    - Family involvement
    - Academic counseling
    - Tutoring and mentoring
    - Study skill and specific academic skill implementation
    - Transition programs and summer residential programs
    - College admissions and placement test preparation" (Brandes, et al.)

The assignment of causation is a deeply contested issue in social research; therefore, in an attempt to design studies that evaluate the effects of outreach programs, careful precautions must be taken. In Chapter V of this report, the authors identify important considerations for an effective evaluation of programs and distill their recommendations for future evaluations of outreach programs. A reliable student information system for tracking the progress of participants is essential for program evaluation. The authors warned in their recommendations that the road to a college degree is wrought with many hurdles; for instance, students must remain in school, take college-preparatory courses, take placement tests, apply to college, and fulfill degree requirements. Outreach programs focus on helping students overcome one or more of these hurdles. These program goals must be identified by program evaluators so that they can be translated into performance indicators that are measurable. According to the authors, a complex task in evaluating outreach programs is determining how to classify various program components. The authors suggest a few approaches, but the overall emphasis was on implementing categories that allow for systematic inquiry.

The authors named four types of studies that could be useful in future evaluations, dependent on the program's agenda or make-up. To study how

individual students respond to program services, individual studies of students can be conducted. Longitudinal, time-series studies of students follow cohorts of students over long periods of time; this type of study involves follow-up surveys of students at critical junctures in their education. Comparative studies of outreach programs and program components, another type of evaluation, are usually done under non-experimental conditions. Under a careful design method the authors note that "[these] studies can uncover the range of conditions that lead to different program outcomes" (Brandes, et al.). The fourth type of study, backward mapping, identifies outstanding programs and isolates the specific practices that contribute to its success so that these practices may be replicated.

The task of the authors was to recommend strategies for increasing the number of historically underrepresented students attending the University of California system. The authors strongly rallied around the idea of the University strengthening its involvement in the K-12 system; in fact, the authors recommend that the University commit to a full partnership with the K-12 system.

Horn, Laura, Emily Forrest Cataldi, and Anna Sikora. "Waiting to Attend College – Undergraduates Who Delay Their Postsecondary Enrollment". NCES 2005-152. U.S. Department of Education. National Center for Education Statistics. June 2005. 88 pp. http://nces.ed.gov/pubs2005/2005152.pdf.

This study examines the characteristics of students who, for whatever reason, choose to delay their entry into college beyond the calendar year in which they graduate high school. Previous studies have determined that those students who wait to attend college are at a much greater risk of not completing a postsecondary education compared with their peers who enroll in college immediately following high school graduation.

Among those enrolling in college for the first time, in 1995-96, approximately one-third had waited a year or more after high school graduation to enroll. Students who did not delay entry into college (i.e., enrolled in the same calendar year in which they graduated high school) ultimately attained degrees at significantly greater rates than those who did delay. Fifty-seven and one-half percent of the students who did not delay entry attained a degree of some kind; 41.9 percent obtained a bachelor's degree. Of those who delayed entry, only 40 percent obtained some kind of a degree and only 8.6 percent obtained a bachelor's degree.

Students who were less well prepared and exhibited other risk factors characterized those who delayed entry. The study also notes that educational expectations tended to decline with the length of delay and students were less likely to enroll in bachelor's degree programs. Clearly, academic momentum is an important variable to the success of college students.

The study found that students who delay entry into college are more likely to come from low-income families, more likely to be Hispanic or American Indian, and more likely to have parents who have never attended a postsecondary institution. Also, delayed entry students are more likely to attend public 2-year colleges and to be enrolled in programs leading to vocational certification or associate's degrees. Students who delay entry were less likely to attend college classes as full time students and were more likely to work more than 30 hours a week while enrolled in school.

Regarding high school academic experiences, 25 percent of delayed entry students completed a less than rigorous high school curriculum whereas 50 percent of the immediate entry students completed an advanced mathematics course. Twenty-five percent of the delayed entry students scored in the bottom

20 percent of the academic intensity measure[43] compared with 8 percent of immediate entry students. Fifty-nine percent of delayed entry students were not prepared, academically, to undertake college-level work compared with 25 percent of immediate entry students.

Students who delay entry into college often have family responsibilities that conflict with the ability to attend college immediately. Twenty percent of students who delayed entry for one year and 33 percent who delayed entry 2 to 4 years had children or were responsible for other dependents compared with 2 percent of immediate entry students.

[43] High school academic curriculum intensity level is a composite measure of students' highest level of mathematics, total mathematics credits, total Advanced Placement courses, total English credits, total foreign language credits, total science credits, total core laboratory science credits, total social science credits, and total computer science credits.

Adelman, Clifford. "The Toolbox Revisited: Paths to Degree Completion From High School Through College". U.S. Department of Education. Washington, D.C.: February 2006.
http://www.ed.gov/rschstat/research/pubs/toolboxrevisit/toolbox.pdf.

The Toolbox Revisited analyzes educational outcomes for a nationally representative class of students who were 8th graders in 1988 and who were scheduled to graduate high school in 1992. Their postsecondary educational progress was tracked through 2000. It builds upon a similar study conducted by the Department that had tracked educational outcomes for a class of students who graduated in 1982.

The objective of the just completed study was to examine those factors that contribute the greatest to *success* in obtaining a bachelor's degree. The students tracked in the class of 1992 were those who graduated from high school, who had enrolled in a bachelor's degree-granting institution at some time by 2000 (8 1/2 years after the class of 1992's graduation date), and for whom there were complete academic records.

The basic question the study addresses is: what demographic, high school performance, postsecondary entry, and postsecondary history (attendance patterns, academic performance) factors are convincingly associated with bachelor's degree attainment for 12th-graders who subsequently attended a four-year college at any time in their undergraduate careers?

Traditional measures of the timing of college entry and persistence are challenged. *The Toolbox Revisited* follows these students over the course of the 8 ½ years as they: may delay, or not, their initial enrollment in college; participate either as full or part-time students; migrate from one institution to another; or stop-out of college at times, or accelerate their educational progress (through credits earned prior to high school graduation or summer school while 'in college'). These metrics are more comprehensive and somewhat different than the traditional accounting of higher educational progress.

Five critical variables are identified and examined that correlate, positively and strongly, with the eventual attainment of bachelor's degrees for the type of students that were studied (i.e., those who had enrolled in a baccalaureate program sometime in the 8 ½ year period under study). These variables relate as much to 'academic momentum' as to pure academic performance.

They are:

- The academic intensity of the high school curriculum that students complete (completion of a curriculum in the top 40% of the high school

curricula of the students in the study whose records were examined is identified as a key benchmark)[44]

- The time lag between high school graduation and college enrollment, or the 'No delay of entry' variable (the benchmark for the study is whether or not the student entered college within 7 months of high school graduation)
- The completion of 20 or more credits in the first calendar year of college attendance
- The completion of more than 4 college credits in summer school
- The accumulation of less than 10 percent of (college) grades attributable to withdrawals or no-credit repeats

The study reaffirms conclusions from an earlier Department of Education study that the academic intensity of the students' high school curriculum counts more than anything else in the student's precollegiate history in providing momentum toward completing a bachelor's degree. The key element contributing to the rigor of the curriculum is the level of mathematics a student completes while in high school.

Among students who attended a four-year college, student and family demographics were noted to have only indirect connections with degree completion. The key demographic elements that were examined were: race/ethnicity, gender, family income and first generation status. The author states that at the moment high school academic history is included in the multivariate account, demography plays a considerably reduced role in the degree outcome.

Of the five key variables discussed in the study, the high school curriculum appears to contribute more to the ultimate attainment of a bachelor's degree than the other four variables. This relationship holds true regardless of race/ethnicity, and adds considerably to the degree prospects of Latino students.

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[44] The academic intensity variable takes a weighted distribution of students from the Education Longitudinal Study, NELS: 88/2000 across 31 levels of academic curriculum intensity and divides the distribution by quintiles. Each level of academic curriculum intensity is a distinct configuration of numbers of Carnegie units earned in core academic areas and other distinct notations about students' course of study. Whereas, for example, the highest intensity level has a *minimum* number of units for English of 3.75 units, for Math of 3.75 units, for lab sciences no fewer than 2 units *plus* additional units in Computer Science, along with more than one AP unit, and so on --- there are no minimum number of units for the 31st level of intensity. The *average* number of units expected of students in the *highest quintile* of intensity are: 4.27 in English; 4.10 in Math; 3.2 in core lab science; 3.09 in foreign languages; 3.70 in History and Social Studies; .74 in Computer Science. The *average* number of units expected of students in the *lowest quintile* are: 3.43 in English; 1.81 in Math; .94 in core lab science; .62 in foreign languages; 2.82 in History and Social Studies; .28 in Computer Science. A student who graduated with a curriculum in the "top 40%" of the high school curricula examined in *The Toolbox Revisited* would include one whose curriculum fit within the profile of the two highest quintiles. The top 40% of the curricula proved to be a key benchmark for the study.

The curricula completed by the students who were included in the study were sorted into five categories, or quintiles, based on the cumulative 'intensity' of the core courses completed by the students in the study population. As previously mentioned, a significant component of the different quintiles of curricula intensity was the level of math completed in each. The study concludes that students who complete a curriculum approaching that of the top two quintiles (the top 40%) in intensity stand a significantly greater chance of successfully completing a degree—if they do in fact go on to enroll in a four-year institution at some time (this includes community college transfers).

The following table illustrates the importance of the mathematics component of a student's high school history as the study has determined it pertains to success in college.

Bachelor's degree attainment rate by highest level of mathematics reached in high school by 1982 and 1992 12th-graders [45]

	Class of 1982		Class of 1992	
	Percentage reaching this level of math	**Earned bachelor's**	**Percentage reaching this level of math**	**Earned bachelor's**
Level of Math				
Calculus	5.2	82.1	9.7	83.3
Precalculus	4.8	75.9	10.8	74.6
Trigonometry	9.3	64.7	12.1	60.0
Algebra 2	24.6	46.4	30.0	39.3
Geometry	16.3	31.0	14.2	16.7
Algebra 1	21.8	13.4	16.5	7.0
Pre-Algebra	18.0	5.4	6.7	3.9

NOTES: The columns for level of math may not add to 100.0 percent due to rounding.
SOURCES: National Center for Education Statistics: High School & Beyond/Sophomore Cohort (NCES 2000-194) and NELS:88/2000 Postsecondary Transcript Files (NCES 2003-402 and Supplement).

Based on the analyses of the interplay of the five variables on the degree outcomes of the sample population, the author of the study constructed the following table to express hypothetical outcomes of the cumulative effect of these factors. The table illustrates the *potential* bachelor's degree completion rate for students meeting the thresholds of those cumulative conditions. The author notes that one could choose a different sequence of conditions, but the bottom line would be the same.

It is important to remember that the students upon whose experience these estimates rely are students who indeed had enrolled in a four-year institution at

[45] Adelman. Table 5, page 31. Standard error figures, illustrated in the original, are not recreated here.

some point during the study period. These hypothetical outcomes only indirectly address another issue of particular concern in Texas, which is the need to get more students to enroll in higher education in the first place.

Hypothetical Cumulative Consequences Of Variables Critical To Bachelor's Degree Completion For 1992 12th-Graders Who Earned A Standard High School Diploma By December 1996, Attended A Four-Year College At Any Time, And Whose Postsecondary Records Were Complete, By Race/Ethnicity[46]

	Percentage Earning Bachelor's Degree				
Cumulative Conditions	**White**	**African American**	**Latino**	**Asian**	**All**
1) Baseline, for students enrolled in a 4-year college	67.6%	52.1%	45.4%	67.9%	64.6%
2) No delay of entry to college	71.0%	54.6%	50.5%	68.2%	67.9%
3) No delay plus top 40 percent of high school curriculum and highest high school mathematics above Algebra II	85.6%	65.9%	69.2%	91.5%	84.1%
4) No delay, top 40 percent of high school curriculum and more than four credits in summer terms	90.6%	84.6%	69.2%	92.6%	89.1%
5) No delay, top 40 percent of high school curriculum, more than four credits in summer terms, and 20 or more credits in first calendar year of attendance	92.6%	88.2%	71.9%	93.9%	91.4%
6) No delay, top 40 percent of high school curriculum, more than four credits in summer terms, 20 or more credits in first calendar year, and less than 10 percent of grades were withdrawals or no-credit repeats	95.5%	94.3%	79.4%	95.3%	94.6%

NOTES: Weighted Ns for each cumulative step: (1) 1.45M; (2) 1.33M; (3) 712k; (4) 621k; (5) 310k; (6) 273k.
SOURCE: National Center for Education Statistics: NELS:88/2000 Postsecondary Transcript Files (NCES 2003-402).

The principal lessons of the *The Toolbox Revisited* study revolve around the intertwined notions of academic momentum and the quality of the student's

[46] Adelman, Table 32, page 92. Standard error figures, illustrated in the original, are not recreated here.

preparation for college work and their combined impact on success in college (degree attainment).

Achieving the requisite momentum and preparation are presented as challenges for students, their parents and the academic enterprise. Of the five principal variables for success in degree attainment, upon which the national study focused, two directly involve the precollegiate experience (the intensity of the curriculum and the accumulation of at least 20 credit hours within the first year of post-secondary work) and it is suggested that a third one (delay of entry to higher education) is also well suited for precollegiate intervention.

"The message [of the Toolbox study] encourages all high schools to offer the requisite curricula, to make sure they have teachers who can deliver that curricula, to believe that their students can all reach higher levels of academic intensity in preparation, and to encourage their students to do so—no matter what students' intentions for subsequent education or work may be."[47] High schools and institutions of higher education, however, can, and for several reasons should, work together to help provide the rich curriculum that is needed. The author states that the first year of college can and should begin in high school, either through Advanced Placement courses or though dual enrollment. Higher education can augment the offerings of high schools, particularly through concurrent and dual enrollment programs.

Beginning the postsecondary work in high school can also effectively address the "momentum" variable associated with accumulating at least 20 credit hours of college work through the first year following high school. The author suggests that "If all traditional-age students entered college or community college with a minimum of 6 credits of "real stuff," not fluff, their adaptation in the critical first year will not be short-circuited by either poor placement or credit overload."[48]

[47] Adelman, p. 29.
[48] Adelman, p. 108.

King, Jacqueline E., "Improving the Odds: Factors that Increase the Likelihood of Four-Year College Attendance Among High School Seniors". College Entrance Examination Board. New York: 1996.

This study attempts to identify various factors that contribute, positively, to the likelihood that high school seniors will plan to attend a 4-year college. Special attention is paid to those variables that are associated with college attendance by low-income students. The study focused on eight factors or possible predictors of student college matriculation. Those were: personal background, high school characteristics, family expectations, personal expectations, high school course work, financial concerns, academic achievement, and college counseling. The study sample was comprised of 900 high school seniors in the class of 1995 who took the SAT. This sample included 300 low-income members of the group.

The study affirmed predictors to college matriculation that had previously been identified by other authors. Those included socioeconomic status, family support, education goals, academic self-concept, financial aid, and academic achievement. Additionally, however, two variables that had not been tested previously were identified that posed a greater likelihood of student college-going success. Those new variables were the number of years students spent taking college preparatory courses and the positive role of guidance counselors in high school students' aspirations for attending college.

Three of the eight factors listed above, background, financial concerns, and counseling, proved to be significant as unique predictors of college attendance. Relative to the financial variables used in the study, the author focused on students' perceptions about college financing rather than on the influence of actual dollar amounts of student aid. What the study found was that the degree of importance students placed on financial aid had a negative influence on plans to attend college while the number of financial sources a student could potentially utilize for college was a positive predictor for college attendance. Also, the cost of college was not as important to students as the resources available to meet the financial need.

For low-income students, the importance of financial aid was not as significant as parental approval, academic achievement, and counseling were as predictors of low-income students' plans to attend college.

A significant finding across the board was that the number of years of course work students completed in key academic subjects and the number of Advanced Placement courses they took positively affected students' plans to attend a four-year college.

Another finding relative to guidance counseling related that if a student's high school counselor believed that the student should attend college and he/she works with the student to navigate the processes involved in college matriculation, the likelihood of that student planning to go to college increased significantly.

Surprisingly, two variables previously thought to be of little significance proved important to the analyses. Being a low-income white student was a significant negative predictor of college attendance and having a first language other than English decreased the likelihood that these low-income students ultimately attended a four-year college.

In conclusion, the author determined that while many factors may play a role in impacting whether or not a student plans to attend a four-year college, two variables stand out above others as positive predictors for college attendance. Those are the rigor of the high school academic curriculum and the provision of counseling services to offer students information and encouragement.

Colyar, Julia E., Zoë B. Corwin, William G. Tierney. "Preparing for College: Building Expectations, Changing Realities". Center for Higher Education Policy Analysis. The University of Southern California. 2003. 27pp. http://www.usc.edu/dept/chepa/pdf/CollegePrep.pdf.

In this report, CHEPA (The Center for Higher Education Policy), an interdisciplinary research center based at the University of Southern California, defined and discussed specific components that could possibly be employed to improve college participation rates of low-income urban students when they participate in "college preparation programs". According to the authors, these programs supplement and/or complement what occurs in school (Colyar, et al. ii). Programs can either begin as early as junior-high or as late as the senior year in high school. They either concentrate solely on increasing academic skills or are socially oriented. The purpose[49] of this report is to evaluate the following nine components defined by CHEPA:

- A rigorous academic curriculum
- Academic, college, and career counseling
- Co-curricular activities
- Culture
- Family and community involvement
- Peer support
- Mentoring
- Timing of interventions
- Cost

Academic preparation, according to the authors, is a critical component of college participation. Preparation, as defined in the report, refers to completing a significant number of rigorous courses during high school. Students, in particular under-represented students, are more likely to be inadequately prepared for college. This dramatically influences their decision to obtain a higher education. In most cases, low-income students are more likely to be enrolled in non-rigorous courses compared to their more advantaged peers. Findings indicated that more than 70 percent of students who undertook a rigorous high school curriculum persevered to complete an undergraduate degree.[50] In addition, researchers found that students who participate in college preparation programs have higher college participation rates and more determination to complete college compared to students who participate in vocational programs in high school.

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[49] After developing the nine components, CHEPA commissioned scholars to conduct an extensive literature review on each of the components. They wanted to determine what the literature review revealed about the influence the factors had on college preparation and enrollment.

[50] Includes first-generation students.

The second component evaluated was counseling. In the evaluation, the authors focused specifically on school counseling. Noted in the report was the dissemination of secondary counseling services students receive. They found that the need for counseling is specifically pronounced for women, students of color, low-income students, rural students, first-generation students, and college bound students. Counseling activities were also suggested. They ranged from fostering college-going aspirations to assisting parents in understanding their role in fostering college aspirations.

A rigorous academic curriculum, according to the authors, does not "guarantee" college access. Programs must incorporate a combination of academic skills as well as social skills to stimulate students' intellectual and social interests. In terms of co-curricular activities, the authors reported that these activities can be formal or informal. Formal activities include participating in summer workshops, retreats to discuss college plans, participation in graduation ceremonies from the program, and participation in service learning activities. Informal activities, on the other hand, include before and after school events, weekend social events, group trips, and associating with fellow prep peers. The authors listed several strategies for enhancing co-curricular activities in programs.[51]

The authors report that incorporation of students' and their family's cultural background creates an environment that influences their college aspirations and college-going identities. This incorporation into a college preparation program can affect a student's learning, how curriculum develops, and how teaching methods are employed. Findings indicate that college participation skills and knowledge are most effectively communicated by programs that incorporate students' environments into academic and social strategies (Colyar, et al. 8). The authors note that research has not discovered the best way to incorporate a student's identity into a college prep program. To implement culture into a college prep program, the authors suggest: engaging families and communities of diverse backgrounds in the program, utilizing peer groups and cultural resources, and introducing culture into programs formally.[52] Similarly, the authors note that parents' involvement at school and home has a positive association with academic success, attendance, homework completion, secondary graduation, and college participation. The research indicates that family involvement in college preparation is vital for low-income families.[53] However, difficulties have occurred mainly as a result of inadequate program staff, parents' limited time and college experience.

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[51] A few strategies included: offering a wide range of academic and non-academic activities, minimizing obstacles to participation (planning, costs, and access to transportation), asking for student input, incorporating cultural values and themes.
[52] By formally, the authors mean workshops and courses on cultural history, introducing cultural material into a curriculum and program that relates to the students.
[53] As a result of tracking and inadequate schools.

Mentoring was another component discussed in the report. Programs can offer different types of mentoring such as peer-based, school-staffed and faculty-based, community volunteers, one-on-one programs, and one mentor working with a small group of students. In fact, research has shown that one-on-one programs in combination with long-term relationships have positive results regarding college participation and success. However, the authors noted that it is unknown if having a specific mentor in a program is critical. In addition, the authors suggested different strategies for developing a mentoring program.

In the report, the authors argue that early interventions regarding college preparation are highly overlooked. Research consistently shows that waiting until the last year of high school to start college preparation is too late. As stated by the authors, the college process takes "years" of academic preparation and consists of many crucial deadlines (Colyar et al. 16). Delaying such tasks negatively impacts a student's college aspirations and participation. The literature suggests formal and informal strategies for the timing of interventions as well as the scheduling of interventions. Cost analysis in terms of program quality and benefits was suggested as a strategy to increase the academic success of under-represented adolescents in college prep programs. There has been little research on this strategy.

In the report, the authors noted that they limited their focus to a specific number of strategies, namely the ones evaluated, and ignored important factors that could otherwise influence college participation and success. According to the authors, factors not included in the report were financial aid for college, differences in experience by gender and ethnicity, retention in postsecondary environments, and distribution of college information.

Gullatt, Yvette, and Wendy Jan. "How Do Pre-Collegiate Academic Outreach Programs Impact College-Going Among Underrepresented Students?" Pathways to College Network Clearinghouse. 2003. 32 pp. http://www.pathwaystocollege.net/webarticles/pdf/gullatt_precollegiate.pdf

This document provided a summary of the available literature concerning quantitative and qualitative evaluations of current outreach programs. This compilation was done for the Building School Capacity (BSC) committee of the Pathways to College Network. The National Survey of Outreach Programs (2001) is cited here. It examined program participants by their characteristics and classified programs according to goals, services, instructional methods, costs and operational strategies. The focus was on student-centered outreach programs but the authors noted an evolution from student-centered outreach programs to school-centered programs. The authors' evidence for this progression stemmed from their synopsis of Upward Bound and GEAR UP. The authors cited Upward Bound as the "cream of the crop" in student-centered outreach programs and, as such, Upward Bound has been imitated by the GEAR UP program. The GEAR UP program retained the effective practices of the Upward Bound program and merged them with school policies. Now, there is an ever-increasing amount of interweaving between school-centered outreach methods and student-centered methods. Even in the presence of this vast survey, the authors found that the "lack of rigorous evaluation of program components continues to make evidence of the role of outreach in a student's college pathway elusive" (iv). Although the quantitative methods for analyzing these programs remain on the "drawing board", these programs appear to be improving the college attendance rates for underserved youth according to the authors.

Due to the lack of data from pre-collegiate academic development programs, the authors used the most effective cross-cutting elements in academic development programs to predict key factors of the former. Listed in no particular order of importance, the factors included:

- High standards for program students and staff
- Personalized attention for students
- Adult role models
- Peer support
- K-12/program integration[54]
- Strategically timed interventions
- Long-term investment in students

[54] This factor refers to whether or not a program integrates itself into the K-12 initiative. The K-12 Integration factor applies mainly to programs that work with students over a number of years or "truly developmental programs" (14). As stated by the authors, programs with short-term or more specific goals probably will not benefit from integrating their efforts with school policy.

- School/society bridge for students
- Scholarship assistance
- Evaluation designs that contribute results to interventions

Although there is a general lack of quantitative evaluations of college outreach programs, the reviewers were able to access four out of the aforementioned programs surveyed for quantitative and qualitative evaluations. The reviewers found that these four programs had kept sufficient records of student achievement for a meaningful evaluation. They then evaluated each of the four programs based on the ten factors found above. In addition to Upward Bound, this evaluation considered Baltimore College Bound, Career Beginnings, and Sponsor a Scholar.[55] The researchers chose these four programs, in part, because they encompassed the three most common types of student-centered outreach programs:

- **Informational Outreach**: (i.e., Baltimore College Bound)
- **Career-Based Outreach**: (i.e., Career Beginnings)
- **Academic Support**: (i.e., Sponsor a Scholar, Upward Bound)

The *Baltimore College Bound* program focuses on providing low-income minority students with college advising and information assistance. The program begins with in-class presentations to 9th and 10th graders. Individualized assistance is administered to 11th graders. Based on data from the program participants, researchers analyzed college application and enrollment patterns of participants and a comparable control group of Baltimore students. Compared to the control group, Baltimore College Bound participants "were considerably more likely than non-participants to attend college and complete the freshman year".(18) After 1989, not one of Baltimore College Bound's former participants dropped out of Morgan State University in their first three years. For every 100 students in the control group of Baltimore City High School graduates, between 15 and 30 percent dropped out of college within that time period. The University of Maryland has more rigorous enrollment standards than its peer institutions and Baltimore College Bound students maintained a lower dropout rate than comparable students enrolled there. The qualitative information also helped researchers deduce that personalized assistance, strategically timed interventions, and scholarship opportunities influenced the likelihood of student enrollment and retention in college.

Career Beginnings targets high school juniors who have average grades and are from economically and/or educationally disadvantaged families. This program works with the students until they graduate from high school offering educational enrichment, mentoring, career exploration, and employment.

[55] The authors noted that the four programs under consideration chose not to integrate their efforts with K-12 school curriculum. These programs operated on the fringes of K-12, supplementing students' school-learned knowledge.

From the outset, a total of 1574 students who ranked in the middle of their class and showed motivation beyond required school activities were randomly placed into the program or a control group in equal numbers. Two years later, students from each of the groups were interviewed and the results indicated that program participants tended to start college "on time" more frequently. The two groups had similar retention rates during their first year. Although 1233 out of the initial 1574 students responded to the follow-up interview, it was not clear how many of the respondents were from each group. Career Beginnings no longer operates in Boston.

Sponsor a Scholar (SAS) benefits more than 500 economically disadvantaged students exhibiting average grades (B-C range). To participate, these students must demonstrate their intent to comply with program requirements such as extracurricular activities, good attendance[56], completion of program forms neatly and timely, and enthusiasm for working towards the goal of attending college. Although nine out of ten evaluation factors are practiced extensively within this program, its most notable aspect is that it matches 9th graders with adult mentors who advise the students for five years.

The program has been studied by researchers from Mathematica. Mathematica created a control group from the same school. For each SAS member, the researchers matched two non-SAS members based on their race, gender, and GPA. Their GPA's were compared after the first year, and the outcomes were as follows:

	Treatment Group	**Control Group**
10th graders	78.8	77
11th graders	78.1	76.2
12th graders	No Difference	

Additionally, SAS participants had notably higher rates of college attendance during each of the two years following high school:

# Years After High School	**Treatment Group**	**Control Group**
Year 1	85%	64%
Year 2	73%	56%

Qualitatively speaking, students with lower academic scores upon entering SAS appear to benefit more from the program than the higher achievers. Also, students whose mentors contacted them more frequently fared better in terms of their 10th and 11th grade GPAs, first year college attendance, and college retention.

Upward Bound (UB) targets students who have finished the 8th grade, are economically disadvantaged, and who are potentially first generation college attendees. Once again, Upward Bound is the seminal student-centered outreach

[56] The report did not clearly indicate whether program or school attendance was considered here.

program according to the authors. Due to its longevity, extensive data collection has been possible. Mathematica researchers analyzed longitudinal survey data from a group of 3,000 randomly selected high school students. Half of these students were randomly chosen to be in the control group and the other half were placed in the program. The 3,000 students came from 67 Upward Bound programs that were also randomly selected.[57] After longitudinal data collection, it was found that both the control group and the treatment group had similar cumulative GPAs and enrollment rates in higher education institutions. When the data is separated according to race/ethnicity, it is found that Hispanics in UB completed 10 percent more high school credits than those in the control group. Hispanics in Upward Bound benefited in other areas like lower drop-out rates and earning more non-remedial hours in four-year institutions. Upward Bound African Americans picked up 16 percent more AP credits and took fewer remedial courses in two-year colleges than those not in UB. When compared to the control group, a greater proportion of Upward Bound students:

- Earned non-remedial high school credits in math
- Remained in school (35 percent vs. 28 percent)
- Received financial aid to attend college (33% percent vs. 30 percent)
- Earned non-remedial credits at institutions of higher education (6.8 percent vs. 5.7 percent)

Meanwhile, compared to the control group, those with lower expectations upon entering the program:

- Earned about 3 more high-school credits than those in the control group
- Graduated from high school at a greater rate (65 percent vs. 52 percent)
- Had a 12 percent higher probability of attending a four-year university
- Earned close to seven more credits in four-year universities.

One of the issues that the Mathematica researchers addressed was the attrition rate in Upward Bound programs. This is an issue that the TRIO administrators and staff are currently addressing.

[57] Upward Bound programs were offered through the students' high school.

Jones, Rhonda. "Pre-College Academic Programs and Interventions." Pathways to College Network Clearinghouse. Washington, D.C., 2003. 35 pp. http://pathwaystocollege.net/webarticles/pdf/jonesinterventions.pdf

This report is a listing of academic/support college preparation services. The author organized the programs by sections under the following headings: national, statewide, citywide, financial assistance, minority assistance, school-to-work, and service learning. Each of the programs was described concisely using the headings found below:

- Name
- Date Founded
- Location
- Description
- Interventions
- Cohort Served
- Key Components
- Funding
- Evaluation
- Website
- Reference

Some of the programs listed in the report that affect Texas students included: Upward Bound (Nationwide), AVID (Statewide), Project GRAD (Houston, TX), Quantum Opportunities (San Antonio, TX), Hispanic Student Success Program (HSSP) (Statewide), Options for Excellence Project; and Early Options Project (San Antonio, and Dallas).

The author included the intervention methods, or student services, extended by each program. Listed below are some of the student-centered outreach programs that affect Texas students and the intervention methods employed by each. All of the six programs extracted provide academic enrichment services, while five of the six provide mentoring services. Social/cultural services, counseling, and financial aid are offered by four out of the six programs. Upward Bound is the only program listed that provides summer programs to participants.

Program Name	**Academic Enrichment**	**Mentoring**	**Social/Cultural Activities**	**Counseling**	**Financial Aid**	**Summer Programs**
Upward Bound	×	×	×	×	×	×
AVID	×	×	×	×		
Project GRAD	×	×				
Quantum Opportunities	×	×	×		×	
Hispanic Student Success Program (HSSP)	×	×	×	×	×	
Options for Excellence	×			×	×	

One particular feature of the report is an inclusion of whether or not each of the programs had conducted an evaluation. If the program had conducted an evaluation, this report briefly stated some of the findings. However, the report did not specify the methodology used for individual program evaluations.

AVID Evaluation: According to this author, AVID coordinators did not track their students extensively. The program began in 1980 and in 1996 a broad evaluation was conducted. The findings indicated that "a significant number of students had gone to two- and four-year institutions, which was comparable to data of non-participants." Concerning Hispanics and Blacks, the program was frequently effective, raising rates of college attendance, as well as retention rates.[58]

Project GRAD Evaluation: Annual evaluations were conducted which included before and after data describing student outcomes in reference to high school graduation and college matriculation rates compared with non-participatory schools.

Quantum Opportunities Evaluation: Begun in 1989, this program managed to increase college retention rates while significantly reducing the rate of attrition. Students also attended four year universities at an increased rate.

Hispanic Student Success Program (HSSP) Evaluation: This is a relatively new program, but this report claims that it shows the capability of increasing the number of Hispanics attending college.

[58] The author does not elaborate on how the students were tracked, but she cites "Jurich : Raising Minority Achievement", as a reference.

The Options for Excellence Project Evaluation: The original program closed in 1984, but since then spin-offs such as the Early Options Project have continued to expand to 49 high schools, both public and private.

Tierney, William G. and Linda Serra Hagedorn, eds. Increasing Access to College: Extending Possibilities for All Students. Albany: State University of New York Press, 2002.

In an effort to examine the effectiveness of pre-college programs that prepare low-income, under-represented students for college, *Increasing Access to College* explores programs that offer assistance to the pathway of college access. As stated by the authors, the purpose of this book is to provide a network of integrative ideas, theories, models, and concepts about college preparation programs[59] to enable researchers, policy makers, practitioners, and others to reflect on issues that confront these types of programs. This literature is collaboration among various researchers in the field of education. In each chapter, the author(s) present a different perspective regarding college access programs. Each contributor applies their work to previous literature and credible research strategies.

Higher Education Demographics

In 1997, more than 70 percent of the college population could be attributed to White students while African American and Hispanic students accounted for 20 percent. White students accounted for the majority of four-year college enrollments. Latino students were much more likely to attend two-year colleges than any other group. Family income and parents' education level affected college enrollment rates. Students from high-income families were more likely to enroll in a four-year university than low-income students. The same could be said when analyzing college enrollment rates based on parents' education level. In terms of degree completion, White students are twice as likely to attain a college degree as African American and Hispanic students. In Chapter 2, Clifford Adelman reported that high school graduates from rural areas, particularly low-income students, are at the greatest disadvantage in terms of opportunity to adequately prepare for college (Adelman 57). College completion rates revealed that suburban students were more likely to attain an undergraduate degree than rural or urban student populations.

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[59] The editors define college preparation programs as enhancement programs that supplement a school's regular activities and are aimed at low-income youth who might not otherwise be able to attend college.

Hagedorn and Tierney also point out that they are focusing on programs that are not aimed at high achievers (e.g. gifted and talented) who are likely to attend college, or at students who attend private academies or live in upper-income neighborhoods. They are concentrating on initiatives at the local, state, federal levels that try to increase college access for low-income urban students.

College Access Programs

Throughout the literature, Tierney, as well as other authors, reported that since there is a scarce amount of empirical data regarding program effectiveness in terms of college participation and completion it is difficult to identify characteristics of successful programs. However, previous studies that pertained to nationwide data sets identified student characteristics associated with a high probability of not making the transition from secondary education to post-secondary. The research pointed out that the lack of college attendance is highly correlated with a student's demographic characteristics, specifically race, gender, and socio-economic status.

Hagedorn and Tierney report that despite the efforts made by some programs, there has not been a substantial increase in college attendance, retention, and graduation rates for low-income, minority youth (Hagedorn, et al. 1). Present programs have neither improved nor suppressed the achievement gap. College access rates for African-American, Hispanic, and Native-American students lag behind those of their Caucasian and Asian counterparts, a precedent continued with college graduation and retention rates. In Chapter 1, Watson Scott Swail and Laura W. Perna argue that the use of traditional approaches which ignore academic, emotional, and psychological preparation for college are the cause of the widening gaps between ethnic groups (Perna, et al. 15).

Historically, federal intervention at the post-secondary level focused primarily on reducing economic barriers to higher education by focusing on financial relief through the use of grants, loans, and other financial assistance (Perna, et al. 17-18). According to the authors, this did nothing to improve the gaps in college participation rates among African-American and Hispanic students. As a result, the federal government, as well as non-governmental agencies, developed a different approach to increasing college access through college intervention programs. The most common programs that are currently operating nationwide include Federal TRIO programs,[60] GEAR-UP, I Had A Dream, MESA, and AVID.

Most college access programs nationwide, according to Hagedorn and Tierney, tend to use a deficit model as a foundation for program development. Other contributors throughout the literature contemplate "college access" for under-represented students from cultural, feminist, political, and social perspectives. The literature reports that the objectives of most programs depend on whether they are school-centered or student-centered. The literature reports that the objectives of most programs include smoothing the transition from high school to college, improvement of study skills, counseling (personal and academic), remedial assistance, acceleration options, etc. (Hagedorn 3). College preparation programs, in general, target a broad spectrum of student characteristics such as

[60] The Federal Trio programs consist of Upward-bound, Support and Services programs, and Talent Search programs.

level of achievement, gender, income status, historically underrepresented minorities, and school location. Programs financially involve the public and private sectors.

College Outreach Methods

In Chapter 4, Patricia Gandara classified intervention programs, both early and college, into two categories: student-centered and school-centered. Student-centered programs concentrate their resources and efforts on "individual" students who are selectively admitted to the program. The goal of this type of program is to cultivate the outcomes of individual students with hope of success in secondary and post-secondary education. On the other hand, school-centered programs focus on modifying schools with the intent of schools being the primary sources of mobility for students. Unlike student-centered programs, the effectiveness of school-centered programs potentially affects all students instead of a select few (Gandara 85). However, most of the programs currently in operation are student-centered for various reasons. The author notes that school-centered programs require demanding resources to have an impact and require time to take effect. Furthermore, these types of programs require the cooperation of many professionals in the school and at times this is difficult to obtain. The author argues that student-centered programs are more effective in increasing college access for disadvantaged students despite their cost and labor-intensive approaches.

Impediments to academic success

The literature identifies several impediments to higher academic achievement among historically underrepresented students. As stated by Gandara, there is considerable debate in the literature about the effects that community resources, as distinct from family or peer influences, have on a student's achievement. Sources explain that the quality of local resources can have an affect on a child's developmental outcomes. Children who grow up in disadvantaged conditions have less access to local resources and receive less exposure to developmental activities. When resources are available, often a child's access is limited due to the inability of the parents to utilize the resources that are available to them.

Adelman (1999) reports that a rigorous curriculum strongly predicts positive long-term educational outcomes. Quality educational institutions have a positive effect on students' academic achievement. These institutions, which are more frequently found in affluent communities, tend to provide higher level curricula and better qualified teachers. Since the proportion of low-income, minority students in affluent communities is low, these students do not typically have the benefit of attaining a comparable education. Generally, minority, disadvantaged students experience segregation within and between schools, poor counseling, lower expectations, and tracking, all of which have a negative effect on their endeavors to succeed in higher education. In particular, the authors note that

negative expectations from teachers can impair a student's success. Adolescent peer groups were also noted as having a negative influence on the values and behavior of students (Gandara 91). According to L. Steinburg (1996), this influence is greatest among underrepresented groups.

As noted by Alexander Jun and Julia Colyar, et al., Gandara found that limited financial resources can be a predictor of academic failure. The authors found that although low-income, minority parents have "uniformly high aspirations for their children", they often lack the cultural and social capital[61] to encourage their children's' academic achievement. This lack of knowledge originates from the parents' experience in underprivileged educational systems. As stated by Jun, et, al., adequate cultural and social capital enables children to have more positive educational outcomes. Parents who value the importance of a higher education are more likely to convey such social and academic characteristics to their children. Research has also shown that differing parenting styles are associated with academic success. Financial constraints such as supplanting a family's income and loans were noted to have some influence on a student's decisions about a post-secondary education.

Authors Hagedorn and Tierney report that although students may possess the "academic" capital to enter college they oftentimes do not have the necessary capital to graduate. As noted by Gandara, academic capital is generally higher in more affluent communities. Students from disadvantaged neighborhoods and family situations may not have taken the suitable courses or established proper academic habits resulting in grades and test scores that do not meet university and college admission standards. The situation is further complicated by circumstances such as language deficits and inadequate resources. Tierney argues that preparing students for college must be a collaborative effort between K-12 schools and post-secondary institutions. As stated by other contributors, the academic success of disadvantaged children depends on the capability of programs to meet the students' needs through strategies of affirming their culture rather than rejecting it (Colyar, et al. 206).

Determinants of a successful college preparation program

The primary determinants of success for a college preparation program, according to Tierney, depend on three aspects: defining who should be served in the program, identifying measurable indicators of program success, and establishing indicators of organizational effectiveness. Strategies for effectively evaluating program success are also suggested.

[61] Gandara defines cultural capital as the knowledge of how the system works and social capital as access to important social networks.

"A Profile of the Talent Search Program: 1999-2000." U.S Department of Education, Office of Post-Secondary Education. Washington, D.C., September 2002. 60pp. http://www.ed.gov/programs/triotalent/tsprofile1999-00.pdf.

The Talent Search program, one of the eight federal Trio Programs, serves under-privileged students that exhibit the motivation to further their academic success in post-secondary education. As stated by the authors, the program's primary objective is to increase the proportion of under-represented students who graduate from high school and continue into higher education.[62] Mathematica Policy Research Inc. analyzed the performance reports for Talent Search programs from ten federal regions across the United States.[63] This report provides a comprehensive profile of the Talent Search program based on performance data submitted by nation-wide projects.

In the 1999-2000 school year, the U.S Department of Education funded 361 Talent Search projects across the United States. These projects were hosted by two and four year institutions, both public and private, and community organizations. Criteria for projects included: "at least 65 percent of the participating students must be low-income[64] and potential first-generation college students" and participants must range in age from eleven and to twenty-seven (Carey, et al. 1). The Talent Search program provides a variety of services such as:

- Academic, career, and personal counseling
- Career exploration and aptitude assessment
- Tutoring and mentoring
- Information about post-secondary education
- Exposure to college campuses
- Information on financial aid
- Assistance in college admission and financial aid applications
- Preparation for college prep exams
- Parent workshops (U.S. Department of Education 2004)

In order to analyze the demographic information presented in the performance reports, Mathematica researchers stratified the data by host institution. Researchers found that more than 33 percent of participants were served by projects based in public four-year institutions and 12 percent in private four-year institutions. Two-year institutions served about 30 percent of the participants

[62] The program does not limit students to four-year public universities. They are encouraged to attend the university of their choice.
[63] Each existing program is referred to as a project.
[64] According to the authors, a low income participant is one whose family's taxable income was less than 150 percent of the poverty level amount.

while community organizations served about 25 percent. Results indicated that more than 70 percent of the participants were low-income, first-generation college students. This was consistent across the four sectors. Participant distribution by race and ethnicity revealed that 58 percent of all program participants were either African-American or Hispanic. Thirty-two percent of the participants were White while Asian, American Indian/Alaska Natives, and others comprised 5 percent of the participants.[65] Researchers noted that the race and ethnicity of participants in projects differed across the four sectors. For instance, African-American participants were more likely to be served by projects hosted by private four-year institutions than by projects across all sectors. A similar observation was noted in the case of Hispanic participants. These results were consistent with the previous year. As with other TRIO programs, the Talent Search program serves more females than males.[66] In the 1999-2000 program year, the majority of participants (65 percent) were attending high school while 30 percent were in middle school. Researchers found this distribution to be similar for projects hosted by four and two year institutions. Also, 5 percent of the overall participants had limited English proficiency.

Generally, a Talent Search project serves about fourteen target schools per host institution. Projects hosted by public four-year institutions served more target schools compared to other host institutions. Researchers noted that they examined the extent to which economically disadvantaged students in the target schools were served by the Talent Search program.[67] Estimates indicated that for the school year 1999-2000, 40 percent of students served by the Talent Search program were economically disadvantaged.

To determine evaluations of project services and activities, Talent Search projects reported a list of activities as well as the number of students who attended the activities over the course of the 1999-2000 program year. Researchers analyzed the data, stratifying by education level.[68] The performance report for each project divided project services into two different categories: academic support services and personal and career development services. Academic support services were: tutoring, assisted labs, test taking and study skills development, and academic advising/course selection. Results overall indicated that a majority of participants received academic advising while 20 percent received tutoring and 46 percent received test-taking and study skills

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[65] The authors noted that this was similar to the previous year.

[66] This result was found in:

Myers, David, Robert Olsen, Neil Seftor, Christina Tuttle, and Julie Young. "The Impacts of Regular Upward Bound: Results from the Third Follow-Up Data Collection." April 2004. 212 pp.

http://www.ed.gov/rschstat/eval/highered/upward/upward-3rd-report.pdf

[67] The researchers used the number of students eligible for the federal free lunch program as an alternate measure for the number of disadvantaged students.

[68] Education level was divided into: middle school participants (grades 6th-8th), high school participants (grades 9th-12th or who had dropped out of high school), and adults (any participant who had completed high school or earned a GED).

development. In terms of academic advising, results were consistent between high school and middle school participants. However, the participation level for other academic support services was not as high for high school participants when compared to middle school participants. Furthermore, the percentage of adult participants who received any type of academic support was significantly lower than high school or middle school participants. Personal and career development services were counseling, mentoring, cultural activities, college orientation activities, family activities, and referrals to other service providers. Overall, results indicated that counseling was more frequently provided than any other personal and career development service to participants of all education levels (Carey, et. al 26).[69] Similarly, researchers noted that 57 percent of participants engaged in college orientation activities, while 34 percent participated in cultural activities and 20 percent received tutoring. Analyzing data by strata, researchers found the percentage of students who participated in mentoring and college orientation activities to be relatively consistent.

In terms of performance outcomes, researchers analyzed progression, retention,[70] graduation, re-entry for middle and high school participants as well as admissions and financial-aid for college-ready participants.[71] According to the analysis, Talent Search projects anticipated almost 90 percent of middle and high school participants to remain in school from the previous year to the current. Results indicated that the percentage was much higher than projects anticipated. About 50 percent of the students who dropped out at the beginning of the school year had re-enrolled in school by the end of the year. The evaluation data also showed that more than 90 percent of participating seniors graduated by the end of 1999-2000 school year. This percentage was fairly consistent among the four categories of host institutions. In terms of college admission and financial aid, researchers reported that more than 70 percent of college-ready program participants were admitted to or enrolled in a post-secondary institution. This was consistent with the Talent Search project's overall expectations.[72] Examining the data by host institution, researchers found that projects hosted by community organizations had more college–bound participants admitted to a post-secondary institution while projects hosted at two year institutions had the highest percentage of college dropouts re-enroll (Carey, et al. 34). Among those participants who continued their education, 42 percent attended a public-four year institution, 39 percent attended public two-year institution, 14 percent

[69] The same result was seen in the previous year.
[70] The researchers defined retention as all middle and high school students who will continue in secondary school for the next academic term. Secondary school re-entry is classified as all secondary school drop-outs who re-entered high school or enrolled in a high school equivalency program during the reporting period.
[71] College-ready participants include adults, 12th grade high school students, and high school/high school equivalency graduates.
[72] Researchers noted that Talent Search programs expected around 64 percent of students who dropped out of college to re-enroll. Results indicated a percentage ten points higher.

attended private two-and four-year schools and 5 percent attended other types of schools (Carey, et al. xiii).

Researchers acknowledged that some of the results and demographic data highlighted were inconsistent. Reasons for this included the fact that some projects claimed to provide services to more participants than they reported having. Similarly, projects stated that they had more participants in an outcome than was reasonable. Researchers noted that actions have to be taken to correct these inconsistencies.

"Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation". U.S. Department of Education, Office of the Under Secretary, Policy and Program Studies Service. Washington, D.C. January 2004. http://www.ed.gov/rschstat/eval/highered/talentsearch/talentreport.pdf.

In January of 2004, the U.S. Department of Education released the first phase of an ongoing national evaluation of the Talent Search program. The work represents the first national study of the program undertaken since the early 1970s and was prepared by Mathematica Policy Research, Inc.

The Talent Search program was created in 1965 and began serving students in 1967. The general goals of the Talent Search program include providing postsecondary education services to qualified young people by encouraging them to complete secondary school and enroll in higher education programs. Talent Search personnel also work to publicize the availability of student financial aid and encourage secondary and postsecondary school students who are dropouts to reenter an educational program.

At the time this report was prepared in 2000, there were 360 Talent Search programs nationwide serving roughly 320,000 participants. In 2000, the average number of participants served per program project was 891. The national program was funded at just over $100 million with average per project funding at $279,000. Average funding per program participant was $313.

Although this report is fairly comprehensive, the findings illustrated in this paper were chosen for their relevance to the P-16 Study.

Talent Search program requirements stipulate that two-thirds (66 percent) of participants in each project must be both low-income, as defined by 150 percent of poverty, and potential first-generation college students, as defined by neither parent holding a bachelor's degree. The remaining one-third of participants are not required to meet the low-income or first generation criterion.

The Department of Education study indicates that Talent Search serves a relatively small percentage of students nationwide who, based on their family income, may be eligible for the program. Overall, the number of Talent Search participants is equal to about 21 percent of the number of students eligible for free lunch (not over 130 percent of the poverty level) in target schools and about 6 percent of that population in all schools serving grade 7 or higher.

The Talent Search front-line staff, such as the counselors and advisors, reportedly spent most of their time – often four days a week – in the field, visiting target schools. The project survey indicated that staff spent, on average, about 46 percent of their time in direct service, including counseling; 24 percent on

record keeping, reporting, and administration; and 14 percent on participant recruitment. Over time, Talent Search projects, overall, have increased their focus on early intervention, with the earliest age of recruitment now being 11 years of age as opposed to 14.

Compared with a decade earlier, more (Talent Search) projects appear to be providing academic support services such as tutoring, and to a higher percentage of students. Over 90 percent of the projects offered college orientation activities, college campus visits, cultural activities, referrals, and counseling, whereas 65 percent offered mentoring and 80 percent sponsored family activities. Interviews with participants found that students felt their Talent Search advisors provided better assistance than their school counselors.

Most projects provide various financial aid services including individual financial aid counseling, financial aid workshops for participants and/or parents, assistance with the financial aid application, and scholarship services.

Talent Search service plans varied greatly, both between and within projects, in terms of types of activities, frequency, delivery methods, and target groups. Factors affecting diversity include target area size, target school receptivity, and perception of needs.

Many of the student services were not offered very frequently, did not last very long, and were optional for participants. On average, 38 percent of middle school students and 48 percent of high school students reportedly spent less than 10 hours in program activities during the 1998-1999 program year. The report noted that at one of the case study projects, 69 percent of the high school students saw a Talent Search Advisor five or fewer times during the first seven months of the school year.

Limited resources sometimes prevented projects from serving as many students as they would have liked or from serving all participants who requested a given service. For example, nearly half of all projects were unable to provide tutoring to all students who requested it.

Opinions expressed by student participants have proved useful in gauging the effectiveness of the program. Students reported benefits that included knowledge about college and financial aid, better access to and more choice of colleges, improved academic performance, and increased confidence and motivation.

Despite recent modest increases in average funding per participant, Talent Search remains a generally nonintensive program. For the most part, participation in program services is optional; basic services might be offered biweekly or even just once a month; and many students spend less than 10 hours in program activities over the course of a year. Overall, the program still

adheres to the original assumption that small amounts of service, delivered at crucial times, can make a difference in students' decisions concerning college participation and enrollment.

"Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report From Phase II of the National Evaluation". U.S. Department of Education, Office of Planning, Evaluation and Policy Development, Policy and Program Studies Service. Washington, D.C., 2006.

This report completes Phase II of the National Evaluation of Talent Search. It was performed under contract to Mathematica Policy Research, Inc. An earlier report, entitled "Implementation of the Talent Search Program, Past and Present..." released in 2004, examined the scope and nature of the programs, the students served, and services provided. This report examines the quantitative outcomes of a sample of programs from the three states noted in the title.

The study found that Talent Search participants were:

- More likely than similar students who did not participate in Talent Search to be first-time applicants for federal financial aid.
- More likely than nonparticipants to enroll in a public college or university in their state, and
- Were more likely to enroll in two-year and four-year institutions and the gains were larger and more statistically robust for two-year enrollment.

The analysis was based on administrative data compiled in the three states and a quasi-experimental design to create matched comparison groups. Outcomes of students who participated in Talent Search were compared with outcomes of similar students at the same schools or other schools who did not participate. The analysis focused on students who were in the ninth grade in 1995-96, who were then tracked through 2002. Although all students were in ninth grade in 1995–96, Talent Search participants may have received services through the program at any point from grades six through twelve. The study compared secondary and postsecondary outcomes between Talent Search participants and comparison groups within each state.

In Texas, 10 of the 16 Talent Search projects that were in operation in 1995-96 provided participant data to the study. There were 4,112 students in the Texas Talent Search study cohort who were then matched with almost 31,000 comparison students. The study used propensity score models to compile the comparison groups.[73] Much of the student enrollment data for both the Texas

[73] See, for example, Rosenbaum, Paul R. and Donald B. Rubin. "Constructing a Control Group Using Multivariate Matched Sampling Methods That Incorporate Propensity Score." American Statistician, Vol. 39, 1985, pp33-38.

Talent Search cohort and the comparison students were obtained from the Texas Education Agency and the Texas Higher Education Coordinating Board.

The study objectives included examining differences in high school completion, application for post-secondary financial aid, postsecondary enrollment and persistence that might be attributable to participation in Talent Search. Postsecondary enrollment data were limited to Texas public institutions of higher education. While the findings were similar across the three states studied, this review will focus on the Texas findings.

Talent Search participants in Texas were found to be more likely to complete high school than comparison students drawn from the target high schools—86 percent of the Talent Search students had graduated from high school by 2000, which was 9 percentage points higher than the 77 percent graduation rate of the comparison students. The direction of this outcome appears to be a fairly consistent result for the ten Texas projects that took part in the study.

There were large differences in first-time application for financial aid between Talent Search participants and comparison students: 62 percent of Talent Search participants applied for aid, while only 35 percent of the comparison group students so applied. The direction of this outcome was uniformly observed among the ten projects although the magnitude of differences among these projects did vary. The rate of first-time application for federal financial aid in the study years was 26 percent for the entire state.

Talent Search participants were found to be more likely than comparison students to enroll in a public postsecondary institution in Texas. Enrollment in a public college or university in 1999, 2000, or 2001 was 18 percentage points higher for participants (58 percent) than comparison students (40 percent). Most of the differences in these rates occurred in 1999, the first college enrollment opportunity after high school for the Class of 1999. Statistically significant differences in enrollment across projects were more varied than differences in high school completion or first-time application for financial aid, with very small or no differences at 4 of the 10 projects. Some differences in enrollment depended on the type of institution that served as the Talent Search host. For enrollment at four-year institutions, the projects with statistically significant differences were primarily those hosted by four-year institutions. For two-year institutions, the projects with statistically significant enrollment differences were a mixture of two-year and community-based projects.

The examination of persistence over the three years of postsecondary enrollment that were included in the study (1999, 2000, and 2001), were not as conclusive.

(Note: The postsecondary enrollment rates examined in this report were based on enrollment of members of the 1995-96 9th grade cohort of students who were subsequently found (or not) to have enrolled in a Texas public institution of

higher education. Other analyses often focus on enrollment rates of high school graduates and/or include enrollment in private postsecondary institutions as well as enrollment in institutions in other states.)

Myers, David, Robert Olsen, Neil Seftor, Christina Tuttle, Julie Young. "The Impacts of Regular Upward Bound: Results from the Third Follow-Up Data Collection." U.S. Department of Education, Office of the Undersecretary, Policy and Program Studies Service. Washington, D.C., April 2004. 212 pp. http://www.ed.gov/rschstat/eval/highered/upward/upward-3rd-report.pdf.

Mathematica Policy Research, Inc. (MPR) analyzed the impact of Upward Bound, a student-centered outreach program, on the college-going and college completion rates of its target audience - low-income and first-generation students. The purpose of this document was to report the results of the third follow-up survey from a longitudinal study of the effects of Upward Bound on student outcomes. The first follow-up survey was collected in 1994-1995 but few participants had graduated from high school by that time. Two years prior to the third follow-up survey collection, 1998-2000, most study participants had completed high school. Upward Bound programs emphasize academic preparation as the key strategy for college success. Upward Bound offers counseling and meets consistently with the students throughout the school year in addition to providing "an intensive instructional program that meets daily for about six weeks during the summer" (Myers, et al. xv). During FY 2001 about 51,600 students participated in Upward Bound programs around the nation; it was estimated that Upward Bound spent $4,800 on each student per year. Mathematica researchers designed the study to include 67 (out of 727) regular Upward Bound programs around the nation. These 67 programs were administered by two- and four-year colleges; the researchers excluded other "specialty" Upward Bound programs. The initial survey was conducted to identify the differing project characteristics and practices. It was sent to the 67 program directors in 1993.

Approximately 1,500 eligible Upward Bound applicants from the 67 programs were randomly assigned to the Upward Bound project while another 1,300 of the eligible applicants to the 67 programs were randomly assigned to a control group. To defend the scientific validity of the study, researchers point out that "students in the treatment and control groups have the same opportunities to pursue other services as the typical eligible applicant to Upward Bound" (Myers, et al. xvi). Because all students in the study had the chance to pursue help from programs outside Upward Bound, the student success outcomes reveal the value-added component of regular Upward Bound. Researchers tested the control and treatment groups for differences in key demographic factors such as gender, ethnicity, and low-income status; no differences were found among these factors. The authors mention that only small differences were found concerning peripheral factors such as how often parents checked on homework, number of times students missed a day of school, and mothers' educational expectations. To adjust for these small differences, statistical controls were implemented by the

analysts to compute regression-adjusted estimates of program effects for the control and treatment groups.

At each of the 67 sites, the eligible applicants from 1992 to 1994 were required to fill out a baseline questionnaire. This questionnaire surveyed the students' family backgrounds, attitudes and expectations, and school experiences. In addition to the student survey, the schools supplied transcripts for each of the students who granted their permission and the program coordinators reported annually on the participation of the students in the program.[74] Three separate follow-up data collection efforts contributed to this evaluation.[75] The data evaluated in this report were collected by 2000 at which time the entire sample of students had moved beyond high school age.

Students may choose to end their participation in Upward Bound at any time in their high school experience but students are encouraged to remain in the program from their freshman or sophomore year until the summer after graduation. In an attempt to estimate the effect of duration in Upward Bound on student success, Mathematica researchers matched students who stayed in Upward Bound for shorter periods with similar students who participated in the program for longer periods.

The authors qualify that the effect on the treatment group was not based simply on what Upward Bound accomplishes once students participate, but was also based on the efforts Upward Bound expended to motivate students to participate. In light of this fact, the authors estimated two types of effects. The first effect was estimated with all of the students in the treatment group included, regardless of individual participation rates. The second estimated effect was adjusted for students who never showed up for services; therefore, this estimate indicated only the effects for students who attended at least one session. MPR presented both estimates in detailed tables but the same basic conclusions emerged from both estimates.

Researchers first analyzed the effects on college success indicators for the control group and treatment group as a whole; statistically significant effects were not found, or were unclear. The authors then looked for statistically significant effects within subgroups. The subgroups were defined by the following characteristics.

1. "Educational expectations (less than a bachelor's degree; at least a bachelor's degree). **

[74] Student high school transcripts were collected with the students' permission. Student transcripts were collected from postsecondary institutions the students had indicated in their student surveys. The researchers used the receipt of a postsecondary transcript as an indicator of the student actually attending that institution.
[75] The three follow-up studies were collected in 1994-1995, 1996-1997, and 1998-2000, and the response rates were 97 percent, 86 percent, and 81 percent respectively.

2. Academic risk (bottom 20 percent of ninth-grade academic achievement; top 80 percent). **
3. Program eligibility (low-income and first-generation only; low-income only).
4. Race and ethnicity (African American; White; Hispanic).
5. Sex (male; female).
6. Likelihood of admission to Upward Bound as rated by project directors (most likely; somewhat likely; least likely)" (Myers, et al. 11-12).

** Special attention was paid to these subgroups.

The researchers used certain college "milestones" as measurements of success. Some of these measurements include: college enrollment at a two- or four-year college, number of remedial courses taken, financial aid awarded, and participation in college activities.[76] When exposed to Upward Bound, researchers found that students with initially lower educational expectations had a greater likelihood of enrolling in 4-year postsecondary institutions and that these students experienced a substantial increase in average credits earned at a 4-year institution when compared to those in the control group. Since educational expectations were self-reported and thereby subject to much fluctuation over time, the researchers examined a similar and more stable characteristic: student academic risk. Ninth-grade transcripts were used to identify the low- and high-academic risk students but the results became less conclusive with this sub-grouping method. Upward Bound students with lower academic risk gained higher enrollment rates at 4-year institutions. As a group, lower-risk students also incurred an increase in the average number of 4-year institutional credits earned.

Males who received the services of Upward Bound earned more postsecondary credits than those in the control group. White students in Upward Bound were more likely to enroll in college (two- or four-year) than those in the control group. Hispanic students in Upward Bound tended to attend four-year institutions at a greater rate then their control group peers and other factors indicate that Upward Bound produced a higher rate of persistence in college among these students. No clear, statistically significant effects were found for African American students. The final subgroups considered were described by the likelihood of being selected to participate in Upward Bound. Upward Bound did indeed raise four-year college enrollment rates for the students who were most likely to be served but postsecondary persistence appeared to be the largest for students that Upward Bound was least likely to serve.

In order to analyze the effects that student duration in Upward Bound had on postsecondary enrollment and credits, the researchers utilized two indicators of the length of time students participated in Upward Bound – the duration of

[76] College activities include contact with a faculty member or college advisor and participation in study groups and school clubs.

program participation and program completion.[77] The researchers conducted a one-to-one match of students from the control group with characteristics similar to students of the treatment group.[78] The median length of time students remained in the program amounted to 19 months. The earlier students joined the program, the longer they tended to remain in the program.[79] The researchers noted that when lower-duration students (students who participated for less than two years) added a year of participation onto their duration, postsecondary enrollment rates rose 9 percentage points and the average number of postsecondary credits earned by this groups increased by as many as nine credits. Also, program completion may have raised postsecondary enrollment by as much as 17 percentage points and the average number of postsecondary credits by as many as 16 credits. The analysts noted that these increases in enrollment at postsecondary institutions could be attributed to increases in enrollment at 4-year institutions alone. This means that not only did an increase in program duration and program completion increase postsecondary enrollment, the two factors increased enrollment at 4-year institutions. The researchers found no statistically significant difference in additional participation when they compared students at higher- and lower-academic risk. The majority of the estimated effects were similar for the two groups. The authors restated again the possibility of a model of this type over- or under-estimating the actual effects of program duration and program completion.[80] The representatives of MPR did state that exercises they conducted showed no reason that estimated effects of this model were not credible. Based on these results, the researchers suggested that in order to see greater numbers in terms of the impact of the Upward Bound program, directors should focus on improving student retention.

The authors included an appendix that provided the details of their sample design, especially the random assignment of students to control groups or treatment groups. The authors also explained the statistical methods used to weight each of the students in the study.

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[77] Student duration time was split into three groups (1) participated for 1 to 12 months, (2) participated for 13 to 24 months, (3) participated for more than 24 months. Program non-completers were the control group for the measure of completion.

[78] Since the estimates produced from this method most likely do not include all possible relevant factors acting on student duration time and student outcome, the researchers caution that the results of this approach are not as robust as the findings of the random assignment design used for the analysis of the data without consideration of student duration.

[79] Beware of this statement leading to an incorrect interpretation. The researchers noted that "younger participants stay in longer but are less likely to complete the program." The researchers also noted that the number one reason students leave the program is to get a job.

[80] The authors particularly cited the strong correlation between student motivation and student duration as a likely contributor to the size of the estimated effects.

"Issues Related to the Report of Mathematica Policy Research, Inc., Entitled Final Report of the National Upward Bound Evaluation (April 1999)." The Pell Institute. 15 March 2002. 3pp.
http://www.trioprograms.org/availableresearch/UBMathematicaResponseRevised1.doc

The Pell Institute critiqued the design of the study conducted by Mathematica Policy Research, Inc. entitled "The Impacts of Upward Bound: Final Report of the National Upward Bound Evaluation (April 1999)." The student service components of Upward Bound include strengthening academic skills throughout the school year as well as a six-week summer instruction program on a college campus. Upward Bound also implements counseling and meetings throughout the school year. After consulting with many outside researchers and analysts, The Pell Institute perceived that Mathematica's choice of the control group in this experiment limited the significance of their findings.

Mathematica used random selection to assign eligible applicants to Upward Bound or to a control group. The Pell Institute asserted that students who apply to Upward Bound already show an interest in attending college. By studying students that made the decision to apply to Upward Bound, random assignment was performed on students who had "self-selected" themselves for the study. Also, because students in the control group did not receive the services of Upward Bound, many sought help elsewhere. In fact, 25 percent of the control group students participated in other TRIO programs. Upward Bound students sought college preparation aid outside of the TRIO affiliates, as did students in the control group. The proportion of control group students who sought this aid was 54 percent, while the proportion of the treatment group who sought this aid was 39 percent. This higher proportion of control group students who sought college preparation aid, it was felt by the Pell Institute, indicated that the treatment and control groups were not intrinsically dissimilar.

A true experimental comparative study is one in which the experimenter is comparing A vs. B. The Pell Institute described the Mathematica study as "an A vs. A" quasi-experimental approach, where both groups are inherently similar before, during, and after the evaluation."

The Pell Institute felt that the control group should have been taken from schools that did not work in conjunction with Upward Bound. It was the belief of the Pell Institute that participating Upward Bound schools delivered similar or alternative college preparation services to control group students due to the schools' connection to Upward Bound. Although the Mathematica researchers found some statistically significant results that indicated Upward Bound was meeting its political mandate, The Pell Institute felt that these findings would have been more pronounced had the comparison group been selected from non-participatory schools.

Heikes, E. Joel, Amy Pieper, Kelly S. Shapley, and Pamela Way. "Texans Getting Academically Prepared (TGAP): Year Three Evaluation Report Executive Summary (September 2001-August 2002)". Texas Center for Educational Research. October 2002. 22pp.
http://www.tcer.org/tcer/publications/tgap_y3_exec_sum.pdf

Texans Getting Academically Prepared (TGAP) is a five year effort that is federally funded through a GEAR UP grant provided by the Texas Education Agency. It begins at the middle-school level to prepare low income and minority students to better take advantage of higher educational opportunities. The Texas Education Agency contracts through the Texas A&M University system to manage and monitor the TGAP program. TGAP represents a partnership comprised of the following organizations and businesses: TEA, Texas A&M Pre-College Outreach Centers in Alice and Laredo, Project GRAD, AMS Production Group, and the Texas Business and Education Coalition (TBEC). TGAP provides interrelated activities supporting early awareness of, and preparation for, higher education among students, their families, and schools. TGAP's three objectives are:

- "Building the capacity of educators and students in order for teachers to adequately prepare students for successful participation in challenging college preparatory programs.
- Increasing student and family awareness of college and financial aid opportunities.
- Providing meaningful incentives and support from the business community to promote and reward high student achievement" (Heikes, et al. 2002).

This evaluation analyzes the advancement of the project's goals. The analyzed data consists of demographic and performance data from the Texas Public Education Information Management System (PEIMS) and the Texas Academic Excellence Indicator System (AEIS), document reviews, surveys of teachers, university faculty, parents, and students, and site visits with interviews (project partners, project personnel, school administrators, counselors, Faculty Fellows, and teachers) (Heikes, et al. 2002).

Six South Texas school districts were the cohort for this study: Alice, Corpus Christi, Jim Hogg County, Laredo, Robstown, and United ISDs. There were a total of fifteen campuses participating in the study and two universities, Texas A&M International University and Texas A&M University-Kingsville through the Faculty Fellows program. From the fifteen campuses, 17,000 students participated. The overall population in this study was predominately Hispanic with less than 5 percent both African American and White. Seventy-seven percent of the TGAP students were economically disadvantaged - much higher than the state average. Based on the parent surveys, over 75 percent of the

TGAP parents were Hispanic with less than 6 percent each of White (5.9 percent), African American (2.7 percent), or other ethnic groups (1.3 percent). In addition, the results from the parents' surveys revealed that TGAP parents were economically disadvantaged. About 62 percent of parents interviewed indicated that they have a high school education, a GED, or less than a high school education. In contrast, 34 percent of parents interviewed reported that they have some college, a college degree, or higher.

To evaluate the three objectives of the TGAP program, the researchers divided the evaluation data. Surveys of teachers and university faculty, classroom observations by administrators, and interviews with counselors were used to evaluate the first objective of TGAP. The evaluation of objective two, increasing student and parent awareness, was based on surveys and sign-in forms of students and parents.

In order to fulfill TGAP's second objective, the partnerships, as well as the participating districts, developed a variety of strategies and services to increase student and parent awareness of higher education. Student awareness activities included:

- individual and group counseling by school counselors
- financial aid workshops and fairs
- visits to schools by college representatives
- campus tours
- pre-Advanced Placement course preparation
- classroom pre-college presentations

Based on the student surveys, more than half of the students participating in the program were provided with a student awareness activity, an increase from the previous year. Less than 50 percent participated in more than one college related TGAP activity. More than half of the students participating in the program indicated that they would pursue some form of post-secondary education. Students also identified parents/guardians as their most common information source on higher education. Students' perceptions on post-secondary affordability varied. **Results also indicated that the cost of college was a significant impediment to college participation and success.** Participants from families whose parents or siblings had college experience were more likely to be familiar with colleges, take more rigorous academic courses, and have higher academic expectations for themselves. The author concludes that despite the increase in student participation in TGAP activities, students were still not optimistic about the affordability of higher education.

The TGAP partnerships and participating districts offered the following services for parents: Center for Successful Fathering, college counseling and workshops, college visits, parent education, and Walk for Success. In the third year of implementation, 15 percent of all TGAP parents received services. As in the

student survey, this was also an increase from the previous year. However, there was a decline in the percentage of parents who received counseling regarding their children's' schooling and educational performance. About 70 percent of TGAP parents surveyed who received services expected their children to earn an undergraduate degree or professional degree while 90 percent indicated that their children had college aspirations. In contrast to students, parents indicated that their children received information regarding post-secondary education from school personnel rather than themselves. As with students, parents indicated that cost was a barrier to college participation. Conclusions revealed that although there is an increase in parent participation in TGAP activities there is still a need for more information educating parents on the advantages of college participation and success. The report concludes that the TGAP programs should expand their efforts to adequately inform parents about higher education, particularly for those families who are economically disadvantaged.

In the summer of 2002, the researchers conducted a follow-up parent survey to determine graduated seniors' post-graduation plans. In addition to evaluating the follow-up surveys, the researchers performed a formal analysis to determine if the student-centered programs that TGAP offered were impacting the probability of college participation and success for TGAP students. Researchers performed a regression analysis of the data obtained from these surveys. The analyses indicated that TGAP participation had an influence on the probability that students intended to participate in post-secondary education independent of other influences. The researchers also examined the effects of a student being "advantaged"[81] compared to "disadvantaged"[82]. Findings revealed that if the number of TGAP activities attended by a student increases, then the probability of college participation increases. Results showed this outcome was more pronounced for disadvantaged students compared to advantaged students.

The study also evaluated the third TGAP objective which attempts to involve the business community. With organizations such as Texas Business and Education Coalition (TBEC), efforts are being made to increase program initiatives including the RHSP (Recommended High School Program)[83], teacher positions, and community alliances that support TGAP schools.

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[81] According to the authors, an advantaged student has both parents, a sibling who has attended or is attending college, parents of average education, and has both parents who attended a high school in a district with a high college rate.

[82] A disadvantaged student is defined by the authors as a student from Alice, Jim Hogg County, or Robstown ISDs, from a single parent household, whose parent(s) has less than a high school education, and has no record of participation in TGAP services.

[83] The Recommended High School Program is also referred to as undertaking rigorous high school curricula. The authors note that since TGAP began, the percentage of students who complete the Recommended High School Plan has increased substantially.

Shapley, Kelly, Amy Pieper, Daniel Sheehan, and Keven Vicknair. "Texans Getting Academically Prepared (TGAP): Year Five Evaluation Report (September 2003 – August 2004)". Texas Center for Educational Research. May 2005. 288 pp.
www.tcer.org/tcer/publications/y5_TGAP_Report.merge.pdf.

Texans Getting Academically Prepared (TGAP) is a Texas Education Agency (TEA) project, funded through a federally financed GEAR UP grant. It commenced in October of 1999 originally as a five-year effort. An extension to that five-year grant made funds available for a sixth year through 2005. TGAP intervenes at the middle-school level to prepare low-income and minority students for higher education opportunities.

The project has eight specific goals which are to:

- Increase the number of underrepresented (low-income and minority) students who are prepared to go to college.
- Increase the number of Limited English Proficiency (LEP) Hispanic students who successfully graduate and attend college or other post-secondary education.
- Strengthen academic programs and student services at participating schools.
- Build an academic pipeline from school to college.
- Develop effective and enduring alliances among schools, colleges, students, parents, government, and community groups.
- Improve teaching and learning.
- Provide students with intensive individualized and coordinated support.
- Raise standards of academic achievement for all students.

In addition to the specific goals listed above, TGAP has three "overarching" goals. Those are:

- *Building capacity* – building the capacity of educators and students so teachers can adequately prepare students for successful participation in challenging college preparatory programs.
- *Increasing student and family awareness* – increasing student and family awareness of opportunities for college and financial assistance, and
- *Gaining business and community support* – providing meaningful incentives and support for high student achievement from the business community.

TGAP is coordinated by TEA with assistance from the Texas A&M Precollege Outreach Centers, Project GRAD (Graduation Really Achieves Dreams), and AMS Production Group. This group works with six Texas school districts and several universities to achieve TGAP goals.

The six partnering school districts include Alice, Corpus Christi, Jim Hogg County, Laredo, Robstown, and United ISDs. These districts include fifteen campuses with close to 16,000 participating students, a large majority of whom are low-income Hispanic students.

Conclusions and Implications in Year 5 of the Grant

Building Capacity Goal

One of the TGAP goals has been to strengthen teacher professional development in an effort to improve student performance. However, teacher participation in TGAP-sponsored professional development declined in year 5. "In four of the six districts, at least half of teachers on TGAP campuses (50 percent to 90 percent) participated in at least one TGAP training event; however, in two districts, less than 20 percent of teachers benefited from available opportunities" (Shapley et al. 171). Teacher attrition has become a problem especially relative to AP-trained teachers. "In 2003-04, there were no new AP teachers trained and only 331 of the original 466 teachers (71 percent) remained in the districts. Thus, nearly a third of AP teachers have been lost through attrition." (Shapley et al. 171)

Meetings of AP vertical alignment teams, which were developed to support curriculum alignment in grades 6 through 12, have declined through the years of the project. "In 2003-04, vertical team meetings were relatively infrequent, with about 40 percent of vertical team teachers reporting meeting only one to two times a year and 15 percent of teachers saying that they never met." (Shapley et al. 172)

Precollege Outreach Centers continued to offer a number of services to teachers, students and parents such as college and career nights and field trips to colleges and universities.

Through the four years of the project, TGAP schools have expanded their AP programs significantly. "Student-level data available for 2002-03 reveal that more than one-fourth of TGAP eleventh and twelfth grade students were enrolled in at least one AP course and more than one-fourth of all TGAP high school students were enrolled in at least one Pre-AP course." (Shapley et al. 172) Open enrollment policies for AP courses appear to be working to attract a diverse group of students. Likewise, "since 2000, 85 percent more TGAP students took AP examinations." (Shapley et al. 172) However, student scores on AP exams have declined as more students have begun taking the tests. This issue has raised a significant concern with AP instructors. The open-enrollment policy, as cited by a number of teachers, may be contributing to a decline in the academic rigor of the AP coursework. "Many teachers report that the AP curriculum has been watered down to accommodate the needs of under-prepared AP students."

(Shapley et al. 173) "Considering that many AP students in TGAP schools score below standard (a 3 on AP exams), AP teachers were asked their opinions on the cause. Teachers most often cited students' limited knowledge and skills as an explanation for poor performance, noting problems with language, reading, writing, math foundation, critical thinking, and inadequate experience. Specifically, teachers believe open-enrollment policies have led to unprepared students taking AP classes, some students being placed in AP classes, and some students taking too many AP classes. Accordingly, teachers believe the rigor of the AP curriculum has been diluted and grading standards have become more lenient." (Shapley et al. 173)

Increasing Student and Family Awareness of Higher Education Goal

TGAP students and parents in Year 5 have been provided with services through the school districts and the Precollege Outreach Centers. The most common service received was information on college entrance requirements and financial aid. "In year 5, there were increases over year 2 in the percentage of students who say they visited a college or university, are familiar with four-year universities and community colleges and what they do, and are familiar with the TEXAS grants program." (Shapley et al. 174)

Parents and students remain concerned about the cost of a higher education but their aspirations for college have remained consistently level over the TGAP project period (in the mid to high 60s percentage).

For the graduating class of 2003, "over three-quarters (77.9 percent) of interviewed parents said that their children had applied to college, and nearly 90 percent of those who applied were accepted. Likewise, 88.6 percent of parents indicated that their children did, in fact, enter college in the preceding academic year with 54.7 percent indicating that their children entered community colleges and 38.5 percent indicating that their children entered a public, four-year university in Texas." (Shapley et al. 177)

Improving School and Student Performance

The following list indicates progress toward supporting student access to post-secondary educational opportunities for TGAP students.

- The number of students taking AP Exams has increased by 85 percent at TGAP campuses since 2000.
- The number of students taking college entrance exams has increased by 13 percent at TGAP campuses since 1999.
- In 2003, data from the THECB indicate that almost half (48 percent) of TGAP graduates entered a post-secondary institution in Texas (an increase of 3 percent over 2002).

- Compared to statewide averages, a greater number of TGAP students completed the Recommended High School Program between 1998 and 2003.
- Students in TGAP high schools have a higher advanced course completion rate than their peers statewide.
- TGAP graduation rates are higher than the statewide average.
- Student drop out rates at TGAP campuses were below the statewide drop out rate.

The following list indicates less successful progress for TGAP students in academic preparation for post-secondary educational opportunities.

- TGAP students do not perform as well on the TAKS test as their peers statewide (overall 6 – 13 percent lower test scores).
- TGAP students do not perform as well on AP exams as their peers statewide (23 – 32 percent lower when the Spanish Language Exam is included and 45 – 55 percent lower when the Spanish Language Exam is excluded).
- Students at TGAP campuses taking the SAT and/or ACT tests are scoring well below the statewide average in terms of meeting or exceeding the criterion score for these tests (the statewide average is 27 percent; TGAP students' average score was 6 percent in 2002 and 4 percent in 2003).

Overall, the observation appears to be that there have been marked successes in acquainting students and parents to the value of a post-secondary education and with the processes involved in college admission test taking, securing financial aid, applying to various higher education institutions and in visits to college campuses for informational purposes. There has also been progress in persuading students to take a more rigorous curriculum path to prepare for post-secondary academic challenges.

However, student academic performance overall is still lagging behind the statewide average and this issue continues to be an impediment to post-secondary success. School districts must continue to target their efforts on improving the conditions that support student performance on achievement measures such as the TAKS, the AP Exams, and the SAT/ACT.

Shapley, Kelly, Keith Sturges, Daniel Sheehan, Gregory R. Weiher, Christina Hughes, Joseph Howard. "Texans Getting Academically Prepared (TGAP) Year Six Evaluation Report (September 2004 – August 2005)". Texas Center for Educational Research. March 2006. 341 pp. http://www.tcer.org/tcer/publications/y6_tgap_rpt_2006_web.pdf.

This report includes observations from the sixth and final year of the Texas Education Agency's GEAR UP project – Texans Getting Academically Prepared (TGAP). The evaluation contained in this report gauged progress toward three comprehensive TGAP goals, those being (1) how TGAP influenced the capacity of districts, schools, educators, parents and students to support students' participation in higher education; (2) the extent to which student and parent awareness of college opportunities, including financial aid and assistance, increased; and (3) the academic outcomes for the schools and their students. (Shapley et.al., i)

Building Capacity in TGAP Districts

Emphasis on TGAP-sponsored professional development for teachers decreased over time. Through the six years of the grant, there was a noticeable decline in the number of teachers participating in professional development training. AP training for new teachers suffered, specifically. Although the training was offered on an on-going basis by the College Board, high teacher turnover in the districts contributed to a diminishment of seasoned AP teachers and new teachers did not receive the full benefit of the training offered.

Priority of the AP Vertical Team concept declined over time. One of the TGAP goals was to build a network of teachers who would align the AP curriculum from grade 6 through grade 12. During the final two grant years, only one district sustained vertical team training for its teachers in the core subject areas.

TGAP teachers seldom used EXPLORE and PLAN assessment data for diagnostic purposes. Most teachers either chose not to use data from these assessments or were unfamiliar with them.

Although Precollege Outreach Centers provided important support for districts, personnel turnover diminished services, especially in the last year. Through the six years of the grant, the Outreach Centers supported districts through activities such as arranging campus visits to colleges and universities, providing professional development for teachers and administrators, making presentations on financial aid and college admissions, and assisting with parent involvement programs. However, personnel turnover within the districts toward the end of the grant period curtailed the program continuity.

Advanced Placement Program

TGAP enabled districts to serve underrepresented students in Advanced Placement programs. Pre-AP programs were expanded at TGAP campuses but AP program offerings decreased.

Participation and performance in AP examinations decreased toward the end of the grant period. Performance on AP examinations at TGAP schools was consistently below state and national averages. The percentage of AP exams with scores of 3 or higher (typically the requirement for college credit) was only 5 percent at TGAP campuses. Also, in the last two years of the grant period, the percentage of students taking AP exams decreased by 20 percent at TGAP schools. The low performance numbers on AP exams raised concerns about the academic preparation of TGAP students who were enrolled in AP courses.

Greater intellectual challenge is needed in AP and Pre-AP classes. Focus should be directed away from pure teacher instruction to an active engagement of students in challenging learning experiences.

Teachers expressed concerns about academic standards in AP courses. Teachers in TGAP schools expressed concern that open enrollment policies for AP classes precipitated a diluted curriculum, which, in turn, contributed to poor performance on exams. Implementing a more stringent enrollment policy and increasing course rigor could possibly lead to a better outcome for students on AP exams.

Student and Parent Services

Provision of student services decreased over the grant period. Roughly half of TGAP students received at least one TGAP-related service in the final project year, representing a substantial decrease from previous years. Also, 27 percent of students visited a university, college, or technical school during the final TGAP year, which also represents a decrease from previous years. For parents, information on college admissions and financial aid were reported as having declined in the final two grant years.

TGAP had limited success in increasing parent involvement and raising student aspirations to attend college. Parents in the final year were no more likely to help their children with homework or to talk to them about school compared to previous years. Furthermore, the percentage of students who believed it is very important to have a college degree did not increase. (Shapley, et.al. vi)

School and Student Performance

TGAP schools performed well on indicators of student preparation for post-secondary education. These indicators usually reflect increased participation rather than academic performance. For this reason, this evaluation proves a somewhat neutral point.

TGAP campuses performed less well on key student academic indicators.

- Performance on AP examinations trailed the state average by 28 percentage points and the national average by 38 points in the final project year. (Shapley, et.al. vi)
- Participation and performance on AP examinations has decreased since 2003.
- Performance on the SAT and ACT remains weak. Small percentages of TGAP students scored at or above the criterion on these tests in any year and the percentage decreased from 6 percent in 2002 to 4 percent in 2003. (Shapley, et.al. vii)
- Performance on the TAKS trailed peer campus and state averages. In 2004, TAKS passing rates for TGAP campuses were lower than comparison groups (an average of 5 points lower than peer campuses and an average of 13 points lower than the state average). (Shapley, et.al. vii)

The percentage of TGAP graduates entering higher education decreased. In 2004, less than half of TGAP students (48 percent) entered a higher education institution in Texas. (Shapley, et.al., vii)

Institutionalization and Sustainability

An evaluation of whether TGAP activities can be sustained after the end of the grant period was performed by examining districts' plans for future years. This evaluation was driven by whether or not districts have internalized and institutionalized the TGAP reform efforts. The results are itemized below.

Teachers' familiarity with TGAP decreased. This is related to a decreased level of participation in the final program year.

Student awareness of higher education may not be sustained.

Testing and admissions fees may not be sustained. TGAP districts did not have plans for covering these costs beyond the grant term.

TGAP sustainability is associated with cost. Many TGAP participants fear that the loss of GEAR UP funds will jeopardize the programs that are viewed as most productive (e.g., college visits and funding for SAT, PSAT, ACT, THEA and AP tests).

Waits, Tiffany, J. Carl Setzer, and Laurie Lewis. "Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002-2003". (NCES 2005-009). U.S. Department of Education. National Center for Education Statistics. Washington, D.C. April 2005. http://nces.ed.gov/pubs2005/2005009.pdf.

Kleiner, Brian and Laurie Lewis. "Dual Enrollment of High School Students at Postsecondary Institutions: 2002-2003". (NCES 2005-008). U.S. Department of Education. National Center for Education Statistics. Washington, D.C. April 2005. http://nces.ed.gov/pubs2005/2005008.pdf.

Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002-2003

This study, released in 2005, collects and provides baseline information, on a national level, regarding the prevalence and characteristics of dual credit courses. Information has also been collected relevant to two types of exam-based courses, Advanced Placement (AP) and International Baccalaureate (IB).

For this study, dual credit has been defined as a program through which high school students can earn both high school and college credit for the same course. AP courses are defined as courses that ascribe to the content and curricular goals as developed and published by the College Board. Students may take AP exams and, if the resulting score is a qualifying one, may receive college credit or advanced standing in the subject area in which the course/exam was taken. IB courses are defined as courses that compose a 2-year liberal arts curriculum that leads to a diploma and meets the requirements established by the IB program. AP and IB credit is given at the college's discretion and is granted only after students have applied and been accepted to a college. Dual Credit courses are actual college courses and the credit is recorded on the student's college transcript from the higher education institution offering the course.

This report presents national estimates on the offering of dual credit and/or advanced placement and international baccalaureate courses from the perspective of the nation's high schools.

During the 2002-2003 school year, 71 percent of public high schools offered courses for dual credit, 67 percent offered AP courses, and 2 percent offered IB courses.

The size of public schools was directly related to the percentage of schools offering dual credit and/or AP courses. In 2002-2003, 63 percent of small schools, 75 percent of medium-sized schools, and 82 percent of large schools

offered courses for dual credit. Likewise, 40 percent of small schools, 82 percent of medium-sized schools and 97 percent of larges schools offered AP courses.

Schools located in cities were less likely than schools located in towns or suburban areas to offer dual credit courses. Schools located in rural areas were the least likely to offer dual credit courses.

Schools with the highest minority enrollments were the least likely to offer dual credit courses whereas schools with the lowest minority enrollment were the least likely to offer AP courses.

Nationwide in 2002-2003, public high schools reported 1.2 million enrollments in dual credit courses, 1.8 million enrollments in AP courses and 165,000 enrollments in IB courses. This total may include duplicate counts of student enrollments if a student was enrolled in multiple courses.

Forty-nine percent of public high schools in 2002-2003 offered both dual credit and AP courses, 20 percent offered only courses for dual credit and 16 percent offered only AP courses.

Schools with the highest minority enrollment were the most likely to indicate that they did not offer any dual credit or exam-based courses.

Dual Enrollment of High School Students at Postsecondary Institutions: 2002–03

A companion publication examines dual enrollment from the perspective of the colleges and universities that offer the courses. The *Dual Enrollment* study was also published in 2005. The report notes that dual enrollment is viewed as providing high school students greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college. The report references work commissioned by the U.S. Department of Education's Office of Vocational and Adult Education through which the authors surveyed a wide range of research on the effects of dual credit and other 'credit-based transition programs' on college participation and success. The authors of the aforementioned report concluded that the results of these studies indicated a fairly positive finding that such programs enhance admission and retention in college, although they state that these findings must be characterized as tentative.[84]

[84] Bailey, Thomas and Melinda Mechur Karp. "Promoting College Access and Success: A Review of Credit-Based Transition Programs". U.S. Department of Education, Office of Vocational and Adult Education. November, 2003. 20 February 2006. http://www.ed.gov/about/offices/list/ovae/pi/cclo/crdbase.pdf.

There are 38 states that have enacted dual enrollment policies that support the development of these programs.

Nationally, 93 percent of all public two-year institutions, 64 percent of the public four-year institutions, and 29 percent of private four-year institutions had high school students taking courses within dual enrollment programs. The number of private two-year colleges offering such courses could not be reliably estimated from the survey.

Dual Enrollment was determined to be the principal method of providing high school students courses for college credit. In contrast to the total number of 'enrollments' reported in the *Dual Credit* study, the *Dual Enrollment* study estimates that not quite 680,000 students took college-level courses through a Dual Enrollment program. This estimate would mean that approximately 5 percent of all high school students took college-level courses in 2002-03. It was also reported that high school students who take college credit courses, take one course per semester. (Because of the potential for double-counting noted in the *Dual Credit* survey, these two reports are not necessarily contradictory with respect to the estimates of high school participants.)

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APPENDIX B

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

SAMPLE PROGRAM REVIEWS

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

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AUSTIN COMMUNITY COLLEGE
COLLEGE CONNECTION PROGRAM[1]

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

Austin Community College created ***The College Connection*** in 2004, initially in collaboration with San Marcos Consolidated Independent School District. The goal of the program is to increase the number of graduating high school seniors who enter college. This is accomplished by creating an awareness of the benefits of going to college and by providing hands-on, one-on-one support to assist every high school senior at participating schools through each step of the college admissions process. The program has been greeted with such acclaim that it has very quickly been adopted in several other Central Texas school districts. The program began with one high school and one alternate high school in one school district in the spring of 2004, and now serves nearly 10,000 students in 28 high schools in eight school districts. The districts participating in the 2005-2006 academic year are Austin, Bastrop, Del Valle, Hays, Leander, Manor, Pflugerville and San Marcos.

II. BACKGROUND INFORMATION

Austin Community College (ACC) is a two-year community college providing university transfer, workforce training, continuing education, and adult basic education opportunities.

The College was founded in 1973 as part of the Austin Independent School District. Today, ACC functions as an independent institution and operates six campuses throughout Greater Austin as well as 40 other locations in ACC's service area. Determined and periodically revised by the Texas Legislature, ACC's service area encompasses all of the following counties: Travis, Hays, Bastrop, Caldwell, Blanco, Gillespie, and parts of both Gonzales and Williamson Counties. The ACC District, composed of areas that support the college's operations through an ad valorem tax, include the Austin, Del Valle, Leander, and Manor independent school districts.

Each year more than 65,000 credit and non-credit students enroll in ACC classes. Fall semester 2004 credit enrollment was 29,004.[2]

The College Connection initiative focuses on providing information about the benefits of a college education and the timetables and instructions for making

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[1] More about the ***College Connection*** program may be found at: http://www.austincc.edu/isd/
[2] "About ACC". ACC at a Glance. Austin Community College. http://www.austincc.edu/aboutacc/glance.htm.

application to Austin Community College, for completing the appropriate admissions exams, and for completing the universal Free Application for Federal Student Aid (FAFSA). The program guides high school seniors and their families through the admissions/pre-enrollment process, incorporating campus tours, advising, and hands-on, one-on-one assistance and orientation activities along the way. The process typically begins with letters to parents in **August**, information assemblies for students in **September**, admissions and financial aid applications workshops in **September and October**, college-readiness testing in **November thru February**, additional financial aid workshops in **February, March and April**, orientation to the ACC curriculum and student advising in **March and April**, and concludes with graduation packets that include letters of acceptance to Austin Community College awarded to students with diplomas during their high school graduation ceremonies (**May**).

Generally, the schools that are participants in the *College Connection* program encourage every senior student to participate in the program. San Marcos CISD, the first school district to participate, *required* all students to participate.

Campus tours for groups of prospective students are arranged throughout the year and are hosted at all ACC campuses. Participating schools provide buses to transport students to the campuses and tours may last a half-day or all day.

The process is flexible to accommodate the different calendars of the schools that participate in the program.

Participating schools in the ACC service area vary by the types of communities represented—from urban to suburban to independent towns to rural areas of Central Texas. The students enrolled in these schools are similarly varied. The following table illustrates some of the different characteristics of students served in the ACC service area.

Selected Student Characteristics of Selected *College Connection* School Districts, 2004[3]

School District	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Austin	13.6%	53.1%	30.3%	55.6%	21.8%
Bastrop	10.4%	33.9%	54.3%	48.3%	8.1%
Del Valle	14.9%	69.0%	14.3%	71.6%	20.0%
Leander	5.0%	17.2%	74.0%	19.8%	4.0%
San Marcos	4.6%	67.7%	26.9%	61.9%	6.2%

[3] "2003-04 Academic Excellence Indicator System District Reports". Texas Education Agency. 16 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

State-wide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African-American, 38.7 percent of students were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF SELECTED *COLLEGE CONNECTION* HIGH SCHOOLS

In 2003, the year before San Marcos CISD began its *College Connection* program, 34 percent of its graduates had enrolled in a Texas public or private institution of higher education in the fall of 2003. The median college-going rate for graduates of all Texas public high schools that year was 48.4 percent (the average was 48.5 percent)[4]. In the first year of the program, 332 students, 81.2 percent of its eligible senior students, participated in *College Connection* activities and the immediate result was that the Texas college enrollment rate, in the fall of 2004, for San Marcos' class of 2004, increased to 45 percent. A significant fraction of the total increase in San Marcos' graduates' enrollment in higher education can be attributed to the corresponding increase in enrollment at Austin Community College. 442 students, 98 percent of eligible senior students, participated in the program in 2005.

Austin, Bastrop, Del Valle, and Leander school districts joined the *College Connection* program in 2005. For the base year of 2004, Austin ISD, Bastrop ISD and Leander ISD graduates went on to enroll in Texas higher education in the fall of 2004 at rates at or very near the median of all public high schools in Texas. Del Valle ISD graduates, on the other hand, enrolled at a rate of 20.3 percent - a rate in the bottom quartile of all Texas high schools. In 2005, the first year in which these high schools participated in *College Connection*, 1,316 students went on to enroll in college at ACC in the following Fall semester accounting for a 37.6 percent increase in enrollment from *College Connection* high schools from Fall 2004 to Fall 2005.

The following table illustrates the recent college-going rates for graduates of public high schools in the following school districts.

[4] "Texas High School Graduates from FY 2004 Enrolled in Texas Higher Education Fall 2004". Provided by the Texas Higher Education Coordinating Board, June 9, 2006.

Percent of Participating School Districts' Graduates Found in Texas Public and Private Institutions of Higher Education in Fall Following Graduation[5]

School District	2003	2004
Austin	44%	45%
Bastrop	31%	43%
Del Valle	23%	20%
Leander	52%	53%
San Marcos	34%	*45%*
State Average	48.5%	48.6%

Note: The italicized cells in the table indicate the years in which the *College Connection* program has been in effect at the respective schools.

Enrollment of graduates of these schools at ACC in the fall following implementation of the *College Connection* program, increased significantly.

Percent of Participating School Districts' Graduates Enrolled in Austin Community College in Fall Following Graduation[6]

School District	2003		2004		2005	
	#	% of Class	#	% of Class	#	% of Class
Austin	560	14.5%	527	14.2%	630	16.9%
Bastrop	33	7.9%	35	8.6%	70	15.7%
Del Valle	38	9.9%	31	8.0%	58	16.1%
Leander	173	18.6%	165	17.3%	242	23.8%
San Marcos	33	8.0%	48	12.2%	49	12.3%

Selected Performance Measures for School Districts Participating in

[5] "High School to College Linkages". Texas Higher Education Data. Texas Higher Education Coordinating Board. 16 February 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm. and "Texas High School Graduates from FY 2002-2005 Enrolled in Texas Higher Education Fall 2002-2005". Texas Higher Education Coordinating Board. 9 June 2006.
High School graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.
[6] High School to College Linkages". Texas Higher Education Data. Texas Higher Education Coordinating Board. 16 February 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.

The ACC *College Connection* Program, 2004[7]

School District	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/ Dual Enrollment Completion	% of Grads Found in Higher Education*
Austin	69.6%	72.0%	40.2%	25.0%	45%
Bastrop	67.1%	55.2%	24.5%	17.6%	43%
Del Valle	84.1%	35.6%	6.4%	10.2%	20%
Leander	73.6%	74.3%	36.8%	19.3%	53%
San Marcos	77.7%	60.1%	21.8%	16.8%	45%
Statewide	68.4%	61.9%	27.0%	19.9%	48.6%

Note: * The 'Found in Higher Education' data are from the preceding table.

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Data for the actual program participants from the San Marcos High School class of 2004 were obtained from the program administrators. These data were processed through the Texas Higher Education Coordinating Board/Texas Education Agency database. 284 *College Connection* program participants were found to have graduated from San Marcos High School that year. Sixty-two percent of those participants were either Hispanic or African American, and 42 percent were classified as economically disadvantaged. Proportions for these respective categories were lower than that of the entire class, but still somewhat representative.

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The principal services provided by the *College Connection* program were found to include:

- **Information** (about the benefits of higher education)
- **Academic counseling/advising**
- **High school-to-college transition programs**
  - Campus tours
  - New student orientation
  - Student Life information

[7] "2004-05 Academic Excellence Indicator System". Texas Education Agency. 16 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/index.html.

- **Assistance with College Admissions, Financial Aid Applications** and **Entrance and Placement Exams**
    - College-readiness testing (assessment of foundational skills in reading, writing, and mathematics to ensure correct college course placement)
    - ACC Acceptance Letter at High School Graduation
    - Assistance with registration for ACC Classes

The *College Connection* activities all occur in the students' senior year of high school.

The information about the benefits of higher education is provided in an assembly of the senior class called for that purpose. ACC admissions applications, financial aid workshops, and testing preparations are provided in a more direct, one-on-one fashion. These services are provided by the student services staff of Austin Community College.

Students are transported in groups to the ACC campuses for the campus visits. Transportation is customarily provided by the respective high schools.

High School Services that Augment the *College Connection*

The several schools that have entered into the *College Connection* program provide various services in addition to those provided through the program. San Marcos High School implemented a distinct school-to-college emphasis in 2004 when it designated a specific staff person, the Coordinator of Advanced Academic Services, to be the point person on campus for the *College Connection* program and for other, related activities, particularly SAT preparation and test activities. The Coordinator reports directly to the Principal and has a number of duties including the direction and management of the instructional program at the school, particularly all advanced academic services. Expenses of the *College Connection* program associated with the office of the Coordinator of Advanced Academic Services for San Marcos High School are estimated to be approximately $12,500, constituting approximately 25 percent of the Coordinator's time.

Time and expense associated with the SAT test-prep activities also approximates 25 percent of the Coordinator's time. Expenses of SAT test preparation materials were provided for by a grant from a San Marcos educational foundation.

The Coordinator of Advanced Academic Services for San Marcos High School works closely with the Career Advisor for SMHS whose specific responsibility it is to counsel all students to apply for a post secondary college program, to collaborate with the counseling department to manage the scholarship application process, to help students locate and make application for scholarships, and to work with students and parents in identifying sources for securing financial aid other than

through scholarships. The Career Advisor coordinates SAT and ACT test-taking activities, financial aid applications, and college admissions applications.

Students at San Marcos High School have several opportunities during the year to take the SAT exam. Multiple practice sessions are provided the students, in advance of the tests. Students in the 9th, 10th, and 12th grades must pay the test fee, unless they are eligible for free or reduced price lunches. SMHS 11th graders may take one SAT exam at no cost.

Costs of Services

Estimated Costs of Services Provided by Austin Community College
***College Connection* Program for San Marcos High School**
(Initial Program Year)

SERVICE	2003	2004
Regular Program		
Total Expenses		$12,332
Per Participant Expenses	N/A	$37.14
Campus Visits		
Total Expenses		$405
Per Participant Expenses		$4.05
Regular--No. of Participants	N/A	332
Campus Visits--No. of Participants		100

The *College Connection* is provided to high schools at no cost for ACC services. This is a hallmark of the *College Connection* program. The only cost to a school is bus transportation to ACC campuses for campus tours. San Marcos CISD spent $150 for three bus trips in 2004.

VI. ADMINISTRATIVE RELATIONSHIPS

The independent school district superintendent and the Austin Community College president co-sign a Data Sharing Agreement permitting the transfer to Austin Community College of student demographic and test score data for all senior students. This agreement addresses the issue of how student data will be used.

VII. SELF EVALUATIONS

ACC actively seeks feedback from school district and high school personnel to improve the *College Connection* program in collaboration with its ISD partners. It conducts feedback sessions with districts as requested. ACC also conducts an internal feedback session with all direct service providers among its student services staff to gain an understanding of common issues communicated to ACC staff by high school staff across all *College Connection* activities and all participating schools.

VIII. REPORTED "LESSONS LEARNED"

Administrators for the *College Connection* program believe it is effective and has been a success for ACC and the participating districts. The enrollment results from Year 1 (2003-2004) and 2 (2004-2005) demonstrate this. The ACC *College Connection* coordinators suggest the following for those considering implementing such a program:

- Schedule dates for the coming academic year *College Connection* activities early in the summer.
- Start with one or two schools; work through the challenges as you refine your system; then expand.
- Provide for a system that mandates, or strongly encourages, 100% participation among students in each senior class.
- Provide for a system that sends a continuing message to school district and ACC staff of the value of the *College Connection* program.
- Celebrate the success of the efforts of the school district and ACC staff.
- Increase emphasis on completion of the FAFSA (Free Application for Federal Student Aid).
- Take your show on the road: communicate rising college-going rates to school and college Boards of Trustees.
- Reconfigure the traditional approach to student outreach and recruitment to break barriers. The "come see us if you are interested" approach is no longer effective with a great majority of high school students.
- Award acceptance letters during graduation ceremonies as a powerful symbol of the transition from high school to college.

IX. CONCLUSIONS

The *College Connection* program provides four of the key service elements determined by the Study to be significant interventions for students aspiring to a college degree. Assistance with a college admission application and completion of the FAFSA, and the provision of campus tours, among others, provide the students with a good 'first step' in gaining admission to ACC or other any postsecondary institution. For the Class of 2004 high school graduates who participated in the *College Connection* program, 57 percent were found in enrolled in college in the first year following high school graduation.

The initial college enrollment results, when compared to the base year (year before implementation), for San Marcos high schools are impressive and the initial enrollment at ACC from the other districts now participating indicate the impact of the *College Connection* efforts.

BLINN COLLEGE DUAL CREDIT PROGRAM[8]

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

Blinn College has active Dual Credit (also commonly referred to as Dual Enrollment) agreements with 30 different school districts, 28 of which are in the school's extensive service area. Two districts are in another college's service area but are served by Blinn College (2005-2006) with the consent of the other community college. Eligible students in these districts may take certain courses through this program that simultaneously earn them college credits as well as credit toward their high school diploma.

High Schools with Active Dual Credit Arrangements with Blinn College, Fall 2005

High School	High School, Cont.
Anderson-Shiro	Hempstead
Bellville	Iola
Brazos Christian School	Lexington
Brenham	Madisonville
Brenham Christian Academy	Mumford
Bryan	Navasota
Burton	North Zulch
Caldwell	Richards
Columbus	Round Top-Carmine
Faith Academy	Schulenburg
Fayetteville	Sealy
Flatonia	Snook
Franklin	Somerville
Giddings	St. Joseph Catholic HS
Hearne	Weimar

In the fall of 2005, there were 886 students enrolled in the Blinn Dual Credit program.

[8] **Dual Credit** defined: THECB *Rules and Regulations,* Chapter 4, Subchapter D, and Chapter 9. (12) Dual credit--A process by which a high school student enrolls in a college course and receives simultaneous academic credit for the course from both the college and the high school. While dual credit courses are often taught on the secondary school campus to high school students only, §4.84 of this title (relating to Institutional Agreements) and §4.85 of this title (relating to Dual Credit Requirements), also apply when a high school student takes a course on the college campus and receives both high school and college credit. Dual credit is also referred to as concurrent course credit; the terms are equivalent. However, dual (or concurrent) enrollment refers to a circumstance in which a student is enrolled in more than one educational institution (including a high school and a college). See: http://www.thecb.state.tx.us/Rules/tac3.cfm?Chapter_ID=9&Subchapter=A.

II. BACKGROUND INFORMATION

Dual Credit/Enrollment Nationally

The National Center for Education Statistics has recently published two works providing an insight to the magnitude and certain characteristics of these programs, nationally. One, *Dual Credit and Exam-Based Course Offerings in Regular Public High Schools: 2002-03*[9] (Dual Credit) examines this program from the perspective of the high schools engaged in these activities. The other, *Dual Enrollment of High School Students at Postsecondary Institutions: 2002-03*[10] (Dual Enrollment) approaches the programs from the perspective of the institutions of higher education. Both focus on these activities in the 2002-03 academic year.

The papers note that there is no national source of information on dual enrollment or baseline data on dual credit and exam-based courses for high school students.

The *Dual Credit* study, published in April 2005, is the first national survey to provide baseline data on dual credit and exam-based courses, including Advanced Placement (AP) and International Baccalaureate (IB) courses, for public high school students. It found that 71 percent of the nation's public high schools offered courses for Dual Credit. Public high schools reported an estimated 1.2 million enrollments in courses for Dual Credit in the twelve-month 2002-03 school year (this total may include duplicated counts of students who took multiple courses). Forty-nine percent of the high schools offered both Dual Credit and AP courses. Thirteen percent of the public schools did not offer any Dual Credit or exam-based courses during this time period.

The *Dual Enrollment* study was also published in 2005. The report notes that dual enrollment is viewed as providing high school students greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college. The report references work commissioned by the U.S. Department of Education's Office of Vocational and Adult Education through which the authors surveyed a wide range of research on the effects of dual credit and other 'credit-based transition programs' on college participation and success. The authors concluded that the results of these studies indicated a fairly positive finding that such programs enhance admission and retention in college, although they state that these findings must be characterized as tentative.[11]

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[9] "Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002–03". National Center for Education Statistics. U.S. Department of Education. Washington, DC. 7 February 2006. http://nces.ed.gov/surveys/frss/publications/2005009/.

[10] "Dual Enrollment of High School Students at Postsecondary Institutions: 2002–03". National Center for Education Statistics. U.S. Department of Education. Washington, DC. 7 February 2006. http://nces.ed.gov/surveys/peqis/publications/2005008/.

[11] Bailey, Thomas and Melinda Mechur Karp. "Promoting College Access and Success: A Review of Credit-Based Transition Programs". U.S. Department of Education, Office of Vocational and Adult

There are 38 states that have enacted dual enrollment policies that support the development of these programs.

Nationally, 93 percent of all public two-year institutions, 64 percent of the public four-year institutions, and 29 percent of private four-year institutions had high school students taking courses within dual enrollment programs. The number of private two-year colleges offering such courses could not be reliably estimated from the survey.

Dual Enrollment was determined to be the principal method of providing high school students courses for college credit. In contrast to the total number of 'enrollments' reported in the *Dual Credit* study, the *Dual Enrollment* study estimates that not quite 680,000 students took college-level courses through a Dual Enrollment program. This estimate would mean that approximately 5 percent of all high school students took college-level courses in 2002-03. It was also reported that high school students who take college credit courses, take one course per semester. (Because of the potential for double-counting noted in the *Dual Credit* survey, these two reports are not necessarily contradictory with respect to the estimates of high school participants.)

Another study identified during the preparation of this paper pertains to an analysis conducted by the Florida Department of Education[12] that analyzed the college-going experience during the 2001-2002 academic year of recent high school graduates and determined that there was a greater fraction of those students who had taken at least one dual enrollment course enrolling in both two-year and four-year public institutions in Florida than the class as a whole. Sixty-four percent of those who had taken a dual enrollment course enrolled in a Florida community college or university in 2001-2002; this was in contrast to the 55.4 percent enrollment rate for the class as a whole. Enrollment rate differences were apparent for African American, Hispanic, and White students, with the proportion of dual enrollment students going on to college even greater for Hispanic and African American students than White students.

The finding with respect to the various racial/ethnic groups is a significant relationship given the gaps in college-going rates underlying Texas' *Closing the Gaps* initiative.

Dual Credit/Enrollment Programs in Texas

Texas Education Agency Data --
As a part of the Academic Excellence Indicator System prepared by the Texas Education Agency[13], there are reports of those students who have completed and obtained high school credit for at least one advanced course from a list of courses

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Education. November, 2003. 20 February 2006.
http://www.ed.gov/about/offices/list/ovae/pi/cclo/crdbase.pdf.

[12] "Dual Enrollment Students are More Likely to Enroll in Postsecondary Education". Fast Fact #79. Florida Department of Education. February, 2004. 20 February 2006.
http://www.fldoe.org/news/2004/2004_03_10/DualEnrollStudy.pdf.

[13] "Academic Excellence Indicator System". Texas Education Agency. February, 2006.
http://www.tea.state.tx.us/perfreport/aeis/

approved by the agency. 'Advanced courses' include dual enrollment courses. In 2003-2004, 19.9 percent of Texas' high school students, or almost 49,000 students, were credited with having taken at least one advanced or dual enrollment course. This percent has fluctuated between 19.3 percent and 20.1 percent of the students since 1999-2000. Of note, however, are the participation rates in these courses that vary significantly by race/ethnicity and by economic status.

In 2004, 24.7 percent of the White high school students had completed some advanced/dual enrollment courses; the corresponding number for the previous year was 24.4 percent. This participation rate is in contrast to a rate of 13 percent (12.7 percent in 2003) for African American high school students and 15.5 percent (15.3 percent in 2003) for Hispanic students. Only 13.6 percent of economically disadvantaged students had completed such a course.

Texas Higher Education Coordinating Board Data –
According to THECB records[14], the utilization of dual enrollment as a means of accumulating college credits has increased significantly in recent years. The available reports reflect dual credit courses offered by Texas *public* institutions of higher education.

For the period covering Fiscal Year 2000 through Fiscal Year 2005, the number of students taking dual enrollment/dual credit courses has increased from 18,638 to 56,866 – a change of 205 percent. While it remains true that more White students take dual credit courses than do Black or Hispanic students combined, the rate of growth in dual credit course-taking among Black and Hispanic students exceeds that of White students, significantly. The growth rate in dual credit course-taking by White students was 177 percent for the 2000-2005 period, while for Black students, the change was 257 percent and for Hispanic students it was 254 percent.

For all students, the number of semester credit hours (SCH) attempted, per student, per year, has remained fairly steady fluctuating between 6.65 SCH and 7.05 SCH. The vast bulk of semester credit hours provided through dual enrollment are provided by the two-year institutions. For the period FY 2000 through the first part of FY 2006, almost 98 percent of the credit hours originated from the community college and technical college sector. Eighteen Texas universities and 58 public two-year community colleges and technical institutions provided dual credit courses during this period.

One report prepared by the THECB for its P-16 Workgroup tracked a cohort of students who had been enrolled in dual credit courses while in high school through their first enrollment as regularly enrolled college students to then determine the proportion of those students who persisted to yet a second year of college work. The report then compared this persistence in higher education rate to a cohort of first-time-in-college students who had NOT taken dual credit courses while in high school. The period under examination extends from fall 1999 through fall 2001.

[14] Data provided by the Texas Higher Education Coordinating Board from reports prepared for the agency's P-16 Workgroup. February 2006.

Seventy-nine percent of the students who had taken dual credit courses in high school were found to have persisted to a second year of college as a regularly enrolled student. This rate would appear to be significantly greater than the 56 percent persistence rate of the cohort that had NOT taken dual credit courses. This first-year-to-second-year persistence rate among the White dual credit course taking cohort was 80 percent; for Black students the rate was 78 percent. Seventy-seven percent of the Hispanic dual credit students returned to college for a second year. Comparable persistence rates for the NON dual credit cohort were 58 percent for White students, 49 percent for Black students, and 56 percent for Hispanic students.

While these reports do not purport that there may be a causal relationship between dual credit course taking and success through the second year of college, the results of the analyses are certainly provocative.

The Blinn College Dual Credit Program

Blinn College, the Junior College District of Washington County, is located in Brenham, Texas, and serves a 13 county service area with additional campuses in Bryan and Schulenburg. The home campus of Blinn College is located in Brenham, Washington County, Texas. Brenham has a population of approximately 12,000. It lies in the south central part of the state about 90 miles east of Austin and 70 miles west of Houston.[15]

The school districts that presently participate in the Blinn College Dual Credit program represent 11 of the 13 counties in Blinn's service area and are typically centered in smaller towns and rural communities. An exception is the Bryan school district.

Listed in the following table are the districts that enroll relatively large numbers of students in the Blinn College Dual Credit program. The characteristics of the student bodies of these schools are different from those of the Major Urban and Other (larger) Central City districts in Texas.[16] Their students are predominantly White and fewer of the students are characterized as economically disadvantaged.

[15] "About Blinn College". Blinn College. January, 2006. http://www.blinn.edu/newweb/aboutblinn/.
[16] "Snapshot 2003 Summary Tables Community Type". Texas Education Agency. January, 2006. http://www.tea.state.tx.us/perfreport/snapshot/2003/commtype.html.

Student Characteristics of Selected Blinn College Dual Credit High Schools, 2004[17]

High School	% African American Students	% Hispanic Students	% White Students	% Economically Disadvantaged Students	% Limited English Proficient Students
Brenham	25.1%	11.4%	62.0%	29.4%	2.5%
Bellville	13.6%	11.8%	74.2%	21.6%	2.1%
Bryan	23.6%	33.4%	42.3%	50.3%	5.4%
Sealy	14.3%	26.6%	58.5%	34.7%	4.8%
Caldwell	13.3%	16.2%	69.9%	32.3%	1.4%
Giddings	13.7%	32.6%	53.3%	35.6%	4.2%

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African American, 38.7 percent were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

To be eligible to take Dual Credit courses at Blinn College, a student must:

- Obtain written permission from the high school principal
- Have earned a “B” or better average on all high school work attempted
- Complete a Blinn College Application for Admission form
- Provide a high school transcript
- Meet any course pre-requisites stipulated by the college, and
- Either pass, or be exempt from having to do so, a Texas Higher Education Coordinating Board-approved test to determine the student's readiness to enroll in freshman-level academic coursework.

Typically, students become eligible to take Dual Credit courses beginning with their junior year in high school. Exceptions to this requirement for students with demonstrated outstanding academic performance and capability (as evidenced by grade-point average, PSAT scores or other assessment indicators) may be approved by the principal of the high school and the chief academic officer of the college. High school students may not be enrolled in more than two dual credit courses per semester. Exceptions to this requirement for students with demonstrated outstanding academic performance and capability (as evidenced by grade-point average, ACT or SAT scores, or other assessment indicators) may be approved by the principal of the high school and the chief academic officer of the college.

Courses for Dual Credit courses taken by “in-district” students (Washington County) are free of tuition charges; “out-of-district” students pay tuition at a rate of

[17] “2003-04 Academic Excellence Indicator System”. Texas Education Agency. February, 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/campus.srch.html.

$54/semester credit hour, in the 2005-2006 academic year. All students pay a nominal General Fee. (Tuition charge practices for Dual Credit vary among the different community colleges; some do not even charge non-resident students.)

The college earns state formula funding for these credit hours. The participating high school also receives state funding through appropriations for which the Texas Education Agency is the trustee.

Each year, enrollment in Dual Credit approximates 700 students. For the fall of 2005, total enrollment was 886. Enrollment at Brenham High School was the largest, at 225.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF SELECTED HIGH SCHOOLS PARTICIPATING IN THE BLINN DUAL CREDIT PROGRAM

The following table illustrates the recent college-going experience for **all** graduates of the high schools that have significant enrollments in the Blinn College Dual Credit program. They are arranged in order of the number of Dual Credit students enrolled in the program for the period 2002-2005 (from most to least).

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in Fall Following Graduation[18]

High School	2003	2004
Brenham	61.7%	60.9%
Bellville	61.5%	59.3%
Bryan	52.2%	51.9%
Sealy	44.3%	43.3%
Caldwell	48.7%	47.1%
Giddings	50.0%	49.6%
State Average	48.5%	48.6%

The median high school-to-college rate for graduates of Texas public high schools for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[18] "High School to College Linkages". Texas Higher Education Coordinating Board. February, 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm and
"Texas High School Graduates from FY 2002-2005 Enrolled in Texas Higher Education Fall 2002-2005". Texas Higher Education Coordinating Board. 9 June 2006.
High School graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures for High Schools with Significant Enrollments in the Blinn College Dual Credit Program, 2004[19]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees at or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% of Grads Found in Higher Education*
Brenham	69.9%	54.9%	34.4%	14.7%	60.9%
Bellville	66.7%	69.6%	30.8%	22.1%	59.3%
Bryan	69.6%	39.0%	31.3%	13.0%	51.9%
Sealy	66.0%	53.8%	28.1%	16.1%	43.3%
Caldwell	52.9%	54.3%	33.3%	18.6%	47.1%
Giddings	75.9%	53.3%	16.9%	14.7%	49.6%
Statewide	68.4%	61.9%	27.0%	19.9%	48.6%

Note: *The 'Found in Higher Education' data are from the preceding table.

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher Education may be found in Appendices C and D.

V. SERVICES

The Dual Credit Program provides the following standard services:

- Early information (about preparing for college)
- Academic counseling and advising
- Assistance with college admissions, financial aid, or eligibility/placement tests
- Dual Enrollment/Dual Credit

[19] "2004-05 Academic Excellence Indicator System". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/campus.srch.html.

Costs of Services

Estimated Costs of Services for the Blinn College Dual Credit Program

Service	2003	2004
Regular Program		
Total Expenses	$102,875	$133,127
Per Participant Expenses	$106	$96
Per Course Expenses	$1,286	$1,624
Number of Participants/Enrollees	973	1386
Number of Courses	80	82

State reimbursement, earned through the formula, amounted to 47 percent of the cost of the program in 2003 and 45 percent of the cost in 2004.

VI. ADMINISTRATIVE RELATIONSHIPS

Blinn College has developed interlocal agreements with each participating school district that govern the conduct of the courses that are offered students of that district. State regulations promulgated by the Texas Higher Education Coordinating Board (THECB) govern these arrangements.[20] The school district agrees to provide a learning atmosphere and classroom facilities comparable to those considered acceptable on the College campus. The participating school also agrees to provide audiovisual equipment and other usual auxiliary equipment. The school also provides assistance in the registration process.

Blinn College provides an administrator to manage and supervise the program. The College offers the agreed-upon courses, utilizing faculty employed by the College. The College provides instructional support services, including advising and counseling, to meet the needs of the students.

The College provides students with all supplies normally furnished by the College to its on-campus students. Students are responsible for obtaining their own textbooks, which are the same as those used at the College campuses.

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[20] "Rules and Regulations Chapter 4, Subchapter D.". Texas Higher Education Coordinating Board. February, 2006. http://www.thecb.state.tx.us/Rules/tac3.cmf?Chapter_ID=4&Subchapter=D.

§4.84 Institutional Agreements

(a) Need for Institutional Agreements. For any dual credit partnership between a secondary school and a public college, an agreement must be approved by the governing boards or designated authorities (e.g., principal and chief academic officer) of both the public school district or private secondary school and the public college prior to the offering of such courses.

(b) Elements of Institutional Agreements. The dual credit partnership must address the following elements:

(1) Eligible Courses;

(2) Student Eligibility;

(3) Location of Class;

(4) Student Composition of Class;

(5) Faculty Selection, Supervision, and Evaluation;

(6) Course Curriculum, Instruction, and Grading;

(7) Academic Policies and Student Support Services;

(8) Transcripting of Credit; and

(9) Funding.

Source Note: *The provisions of this §4.84 adopted to be effective May 27, 2003, 28 TexReg 4114*

VII. CONCLUSIONS

Why should high school students sign-up for dual enrollment courses?

As noted earlier, dual enrollment is viewed as providing high school students greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college.

If a student can earn even 15 hours of college credit while still in high school, the potential college savings to the student and his or her parents can amount to thousands of dollars. Obtaining the typical maximum of 24 semester credit hours adds to the savings.

For the 2005-06 academic year, tuition and fees alone for 15 semester credit hours at a public university in Texas were expected to average $2,429 for a Texas resident. Add to that the estimated cost of room and board, and transportation and personal expenses, the total cost for a semester at a university could easily approach $7,350. (Books and supplies are not included in this comparison, because there will be similar costs for Dual Enrollment students.)

Similarly, enrollment for 15 hours at the typical public community college in Texas (for a resident of the college district) was estimated to cost $746.50 in tuition. For a student who does not reside in the college taxing district the cost in 2005-06 would be an estimated $1,643. Add to that the potential costs of living away from home, transportation, and other expenses not necessarily incurred by a high school student taking comparable courses at the high school and the savings due to a dual credit alternative are significant.

Depending on the policies of the particular community colleges, Dual Credit students may not be charged any tuition, or pay tuition that is typically one-half the average for Texas public universities, as well as pay for books and supplies. Since the typical high school student is still living at home, room and board and other living expenses a student may pay when away to college will not be incurred.

More information about Texas' College Student Costs, as well as other resources for students and high school counselors has been prepared by the Texas Higher Education Coordinating Board. A particularly valuable document may be reviewed at the following site: http://www.thecb.state.tx.us/reports/PDF/0826.PDF. It is subtitled: "Higher Education Opportunities in Texas—A Summary".[21]

The dual enrollment option is an exceptional opportunity for students to begin earning a college degree, at little or no cost, while still fulfilling high school

[21] "Coordinating Board Presentation to P-12 Counselors, Fall 2005". Texas Higher Education Coordinating Board. http://www.thecb.state.tx.us/reports/PDF/0826.pdf.

graduation requirements. The savings to parents and students are substantial and the head start in higher education will give these students a significant advantage in the future.

Another significant reason that has been cited as an advantage of students and schools participating in dual credit/dual enrollment programs is that such programs directly address the goal of a seamless P-16 educational experience.

FINANCIAL AID OFFICERS AND OTHER IN-SCHOOL INITIATIVES TO INCREASE COLLEGE PARTICIPATION AND SUCCESS
(FOR SELECTED RIO GRANDE VALLEY HIGH SCHOOLS)

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

The position of a Financial Aid Officer (FAO), with the duty of leading and coordinating the schools' efforts to encourage and enable more students to participate in some form of postsecondary education, was instituted in the following schools, in the years indicated:

Financial Aid Officer Initiatives in Effect in the 2003-04 Academic Year

High School	Academic Year First Implemented
Edinburg Economedes (JEHS)	Fall 2000
Edinburg (EHS)	Spring 1998
Edinburg North (ENHS)	Spring 1998
Pharr-San Juan-Alamo (PSJA)	October 1999
PSJA Memorial (PSJA Memorial)	October 1999
PSJA North (PSJA North)	October 1999

In addition to these schools, other districts in Hidalgo County that have or are considering implementing this concept include the Donna, McAllen, Rio Grande City and La Joya school districts.

The purpose of the Financial Aid Officers, in most cases, is to coordinate all school-to-college activities, with the goal of maximizing the number of the school's graduates who go on to participate and succeed in some form of higher education.

Typically, certain academic and guidance counseling services remain the primary responsibility of the High School Counselors. The FAOs in PSJA ISD are required to have master's degrees in counseling and are compensated as a counselor would be. The FAOs in Edinburg CISD are not Guidance Counselors but are typically compensated at the rank of Counselor. The FAOs in the PSJA school district administer the Career Center/Go Center in addition to their other school-to-college service duties. The FAOs in the Edinburg CISD do not have Career Centers in their high schools.

Financial Aid Officers also serve as the campus coordinators for scholarship and various outreach programs provided by colleges and universities. Prominent among these programs are: the Concurrent Enrollment program administered by The

University of Texas - Pan American (ENHS, JEHS), the South Texas College Dual Enrollment program (ENHS), the Upward Bound program (ENHS, JEHS), and the Educational Talent Search program (ENHS, JEHS). At Edinburg High School (EHS) and PSJA Memorial High School (PSJA Mem), both Dual Enrollment and Concurrent Enrollment are the responsibility of the Guidance Counselors. The FAOs help recruit for the Med-Ed program and the National Hispanic Leadership Institute; they coordinate various other activities including special university programs, career fairs, college nights, parent nights, financial aid nights, college visits, visits by college recruiters on campus, newsletters, notices to parents about activities, press releases, and the soliciting of fee waivers for testing and admission fees. They are also responsible for local scholarship programs and the Annual Awards Assembly.

Additionally, high schools or districts may operate a variety of other 'intervention' programs to counsel and help enable students to participate and succeed in higher education. The following table illustrates such prominent activities that have been implemented by these schools.

Other In-School Initiatives in Effect in the 2003-04 Academic Year (ACYR)

High School	Program and ACYR First Implemented				
	GEAR UP	AVID	'Freshman 101'**	Career Center	ACT/SAT Test Prep Programs
Economedes	2002	2000	N/A*	N/A	2004
Edinburg	2002	2000	2002	N/A	2002
Edinburg North	2002	N/A	2000	N/A	2002
PSJA	2002	unknown	unknown	unknown	unknown
PSJA Memorial	2002	2002	N/A	1998	2000
PSJA North	2002	2004	N/A	1996	unknown

* N/A indicates that the program was not in effect during the 2003-04 academic year.
** Semester-length courses, with various unique names (e.g., 'Career Connections' or 'Freshman 101'), are designed to acquaint those students entering high school in the 9th grade with the goals of the institution, the academic rigor of high school, and the expectations of students to properly prepare for post-secondary education. Orientation to helpful study skills, time-management techniques, and related tools are also provided through these courses.

The first GEAR UP class cohort to graduate was in the Class of 2006. Other programs on various campuses include Dual Enrollment, Upward Bound, University Outreach at the three PSJA ISD high schools, and Educational Talent Search.

II. BACKGROUND INFORMATION

The high schools of the Pharr-San Juan-Alamo Independent and Edinburg Consolidated School Districts represent some of the larger high schools in Hidalgo County.

The student bodies of these schools are typical of many in the Rio Grande Valley. They are predominantly Hispanic and economically disadvantaged. They represent one of the principal target groups identified by the state's *Closing the Gaps* plan.

Selected Student Characteristics of High Schools with Financial Aid Officer Initiatives in Effect, 2004[22]

High School	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Economedes	0.2%	98.0%	1.7%	88.5%	20.7%
Edinburg	0.1%	94.1%	4.9%	72.8%	11.0%
Edinburg North	0.6%	95.5%	3.6%	82.7%	17.0%
PSJA	0.2%	98.8%	1.0%	88.8%	25.6%
PSJA Memorial	0.2%	98.0%	1.8%	91.8%	20.4%
PSJA North	0.1%	97.8%	2.0%	83.4%	20.0%

Statewide in 2004, 43.8 percent of students in **all** grades were Hispanic, 14.3 percent were African American, and 38.7 percent of the students were White. 52.8 percent of the students were Economically Disadvantaged and 15.3 percent were classified as Limited English Proficient, in 2004.

The focus of the Financial Aid Officers is on the various high school-to-higher education activities that can be employed to enable students to transition to post-secondary training, be it vocational, work toward an associate's degree, or work toward a bachelor's degree.

III. SELECTED PERFORMANCE MEASURES FOR THE CLASS OF 2004

The tables in this section illustrate the impact of the FAO schools' commitment to try to prepare their students for postsecondary work and to enable them to so participate. Compared to statewide averages, these schools have encouraged more of their students to complete the college-preparatory curriculum, to take the SAT/ACT tests, and to take Advanced/Dual Enrollment courses. While the percent of students who are meeting or exceeding the criterion scores for the SAT/ACT tests (1110 on the SAT, or 24 on the ACT) falls well below the state norm, the average scores for several of the schools' graduates approach or slightly exceed the state average.

[22] "2003-04 Academic Excellence Indicator System Campus Reports". Texas Education Agency. http://www.tea.state.tx.us/perfreport/aeis/2004/campus.srch.html.

Selected Performance Measures of High Schools with Financial Aid Officer Initiatives in Effect, 2004[23]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% of Grads Found In Higher Education
Economedes	77.9%	64.2%	3.8%	14.3%	46%
Edinburg	91.2%	81.5%	8.5%	24.2%	60%
Edinburg North	81.4%	78.0%	8.5%	20.8%	55%
PSJA	90.0%	78.3%	5.5%	41.1%	54%
PSJA Memorial	92.1%	84.4%	3.0%	23.0%	52%
PSJA North	84.4%	82.2%	1.9%	8.5%	60%
Statewide	68.4%	61.9%	27.0%	19.9%	48.6%

Average Sat Scores for Edinburg CISD and PSJA ISD High Schools, 2004[24]

High School	Score
Economedes	825
Edinburg	988
Edinburg North	889
PSJA	960
PSJA Memorial	817
PSJA North	978
Statewide Average for all Students	987
Statewide Average for Hispanic Students	894

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Analyses of the outcomes for graduates of the schools served by the Financial Aid Officers indicate college-going rates in the first fall and first year following graduation that are greater than the average for all Texas high school graduates as well as for reference groups that reflect the predominantly Hispanic, economically disadvantaged student body in these schools.

[23] "2004-05 Academic Excellence Indicator System". Texas Education Agency. http://www.tea.state.tx.us/perfreport/aeis/.
"High School to College Linkages". Texas Higher Education Coordinating Board. http://www.highereddata.org/Interactive/HSCollLink.cmf.
[24] "2004-05 Academic Excellence Indicator System Campus Reports". Texas Education Agency. http://www.tea.state.tx.us/perfreport/aeis/2005/campus.srch.html.
"2004-05 State Performance Report". Texas Education Agency. http://www.tea.state.tx.us/perfreport/aeis/2005/state.html.

Financial Aid Officer Participant Graduates Found Enrolled in Texas Institutions of Higher Education in the Fall Following High School Graduation, the 1st Year Following High School Graduation, and Those Found in the 1st Year Following High School Graduation Who Persisted to the 2nd Year[25]

FAO Program Participant Graduates	HS Class of 2002	HS Class of 2003	HS Class of 2004
Percent Found in the Fall Following HS Graduation	52.6%	54.2%	58.7%
Percent Found in the 1st Year Following HS Graduation	62.0%	62.5%	64.2%
Percent Enrolled in the Year Following HS Graduation Who Persisted to the 2nd Year	79.5%	77.3%	73.4%

The rates at which graduates of the schools served by the FAOs are enrolling in Texas colleges and universities in the fall and first year following graduation exceed the experience of all Texas high school graduates for the years 2002, 2003, and 2004. When compared to a reference group constructed to reflect the racial/ethnic and economic characteristics of these students, the apparent college-going performance of these graduates is even more striking. The table that follows illustrates these performance margins.

[25] These statistics have been developed from data obtained from the Texas' public school and higher education student database maintained by the Texas Higher Education Coordinating Board, June 2006. HS Classes illustrated in the table reference composite data from the graduating classes of the six high schools in the Edinburg CISD and PSJA ISD. Valid SSN's only.

Financial Aid Officer Participant Graduates Found Enrolled in Texas Higher Education Compared to All Texas H S Graduates and to H S Graduates with Similar Racial/Ethnic, Economic and Other Characteristics[26]

FAO Program Participant Graduates	HS Class of 2002	HS Class of 2003	HS Class of 2004
Found in the Fall Following HS Graduation			
Percent Greater Than:			
a. All HS Graduates	0.4%	3.4%	12.0%
b. Reference Group	26.3%	27.8%	35.4%
c. Comparison Group	29.9%	23.2%	23.9%
Found in the 1st Year Following HS Graduation			
Percent Greater Than:			
a. All HS Graduates	4.9%	5.9%	8.9%
b. Reference Group	24.4%	25.0%	26.9%
c. Comparison Group	26.2%	23.3%	17.8%
Those Who Persisted to the 2nd Year			
Percent Greater Than:			
a. All HS Graduates	-2.8%	-4.9%	N/A
b. Reference Group	2.7%	0.9%	N/A
c. Comparison Group	.3%	-3.9%	13.8%

Tables illustrating additional information about the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C, D and E.

V. SERVICES

Service activities for students in high schools with Financial Aid Officer initiatives in place include the following. These services are categorized within the ten standard service categories of the Study.

- **Early Information about College**
    - The Financial Aid Officers typically meet with freshmen students during the fall orientation activities to acquaint them with the schools' college preparatory services. The students are provided handbooks at their orientation.

[26] The Reference Groups reflect the state-wide experience of students of the same racial/ethnic and economic characteristics. The Comparison Groups are derived through application of propensity scores that match these FAO schools' students with students similar not only by race/ethnicity and economic status but also by eight other sets of variables.

- **Family Involvement**

    - Parents are invited to participate in college-readiness activities through the evening programs offered on the various high school campuses. These activities include the dissemination of information on financial aid and other college-going preparation material.

- **Academic Counseling/Advising Activities**

    - Edinburg High School has a Freshman Career Connection course to acquaint students to the expectations of their time in high school; this course also addresses college preparation activities.

    - Other campuses may employ a Freshman 101 course to orient students to the college preparatory activities they will need to undertake.

    - Career Centers are integral aspects of the Financial Aid Officers' work at several of the schools. The Centers utilize a bank of computers and typewriters, utilize career exploration software, maintain extensive web site information for colleges/universities/careers, and provide test preparation material and software, essay writing resources, as well as other resources.

- **High School to College Transition Activities**

    - All students are invited to participate in college visits that are organized by the FAOs. In most cases, those students who take the trips must pay their own expenses. Visits range from one-day marathons to multi-day trips.

    - All students are invited to meet with college recruiters on the high school campus; junior students primarily attend these meetings.

- **Assistance with College Admissions or Financial Aid Applications or Eligibility/Placement Test Preparations**

    - Students in their sophomore year will be advised regarding the various college entrance practice exams and the schedules for these exams that they may take in the 10th grade year.

    - Preparations are finalized for SAT/ACT tests that are taken in the spring of the junior year. In many cases, these tests are provided at no charge to students that test for the first time.

- Students begin preparing college applications and acquire PINs necessary for financial aid applications in their senior year; they also begin exploring financial aid opportunities. Additional college visits are scheduled, if necessary or requested.

- Students are also taking the ACT/SAT tests to improve their scores from previous tests. FAOs assist with these activities and with resume writing, scholarship applications, and, in many cases, career exploration, essay writing, and completion of financial aid forms including assistance with the FAFSA.

- Financial Aid Officers assist students with college applications and ACT/SAT registration through: junior workshops (EHS, JEHS, PSJA Memorial) and senior workshops (ENHS, JEHS, PSJA Memorial).

- **It is a particular goal of the FAOs to assure that every senior has completed an application to attend a college or university. It is also a goal that every senior apply for financial aid**. For example, at PSJA North, it is required that every senior apply to UT Pan American and South Texas College.

- **Concurrent Enrollment/Dual Enrollment Courses (coordination only)**

  - Students eligible for The University of Texas – Pan American Concurrent Enrollment program are recruited to the program beginning in the spring semester of their sophomore year.

  - In the junior year, many students are encouraged to enroll in Dual Enrollment courses provided by STC or Concurrent Enrollment courses on the UTPA campus.

  - Students in all districts may take Dual Enrollment courses at STC at no cost to the student if the course is taken on the high school campus. Students in all districts may take UTPA Concurrent Enrollment courses at a reduced cost to the student.

Costs of Services

Because of the variety of organizational configurations used by the several schools employing Financial Aid Officers, the FAOs were asked to collaborate on an "ideal" configuration of responsibilities and attendant costs. The following table, slightly modified by the authors, illustrates this ideal. This model contemplates the operation of a Career Center in the high school, supervised by the FAO.

Ideal Replication of Financial Aid Officer Initiative

Essential Ingredients	Number	Cost per Year
Financial Aid Officer	1	$50,000
Full Time Assistant	1	$32.500
Benefits @ 18%, est.		$14,850
Desktop Computers	15	$15,000
Copier	1	$ 5,400
Typewriters	5	$ 1,000
Laser Network Printer	1	$ 1,500
Scanner	1	$ 150
Server (1) and Internet Access	1	$ 3,250
Telephones	1+1 cell	$ 1,980
FAX	1	$ 150
ACT/SAT Prep Software	12 ea,	$ 1,800
Career Exploration Software	1 license	$ 1,000
Furniture		$ 3,000
Travel For Staff For Students' Campus Visits		 $ 3,000 $12,680
Food		$ 1,000 yearly (for student refreshments during evening and weekend sessions)
Tutors		Free or paid by school district (college students to assist HS students in the preparation of essays, resume writing and tutoring).
Other Operating Expenses		$23,600 (includes funds for other expenses such as incidental supplies and those necessary to help prepare for and defray student costs associated with the taking of pre-college and college entrance exams, and seasonal expenses involving outside personnel and/or equipment costs associated with students' preparation of the FAFSA and college applications.)
TOTAL		**$171,860**

Note: Given an assumed typical high school size of 2,000 students (the six schools in the PSJA and Edinburg districts averaged 2025 students enrolled in 2004), this "ideal" budget would approximate $86 per enrolled student. Ongoing costs, that would exclude the annual purchase of computers and other equipment with a multi-year useful life, would be proportionately less.

Schools that might implement the FAO concept, but that already have a Career Center operation, might expect the marginal cost to be less than illustrated above.

VI. ADMINISTRATIVE RELATIONSHIPS

The Financial Aid Officers in the Pharr-San Juan-Alamo school district report directly to the high school principal. They also oversee the operation of their respective school's Career Center, with the assistance of a Clerk. FAOS in the Edinburg district also report to the Principal.

VII. SELF EVALUATIONS

Annual evaluations of the FAO program are conducted by each respective principal during the spring semester of each school year.

There are concerns about students' persistence in higher education. While the college-going rates are up and administrators are gratified about this result, there is apparently some evidence that all too many students are dropping out of their college studies. As one strategy to address this concern, administrators are emphasizing the completion of the Recommended /Distinguished curricula.

VIII. CONCLUSIONS

The Financial Aid Officers have been able to play an important role in elevating the college-going rates of the graduates of their respective high schools. Working closely with the high school counselors, teachers, and administrators, but with the ability to focus the necessary time and energy on those tasks directly involved in enabling students to gain admission to and financial support for a postsecondary education, these officers appear to have had a measurable impact on the postsecondary participation rates of their graduates. Imbedded full-time, as they are in the schools, enables greater economies of scale and an apparent greater ability to coordinate the various school-to-college activities provided by institutions of higher education that involve the students. Their employment by the high schools reflects the schools' commitment to postsecondary participation on the part of their graduates.

Comparisons of the recent higher education enrollment rates of the graduates of these schools with the state average and the average of a reference group designed to reflect the demographic characteristics of these students indicate that the graduates of the FAO schools are enrolling at significantly greater rates.

FORT WORTH INDEPENDENT SCHOOL DISTRICT
HB 400 PROGRAM

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

This ***House Bill 400*** program is administered by the Fort Worth I.S.D. and the Lake Worth I.S.D., in cooperation with Tarrant County College (TCC) and The University of Texas at Arlington (UTA).

II. BACKGROUND INFORMATION

HB 400, 77th Texas Legislature (2001)[27], mandated that school districts that had high schools among the lowest 10 percent in the state in the percentage of students graduating from high school and enrolling in the following academic year in an institution of higher education must develop plans to increase the percentage of graduating seniors who enroll in college. Institutions of higher education were directed by the bill to collaborate with school districts in developing these plans. School districts that were initially identified as subject to the Act were to implement the plans beginning with the 2002-2003 school year. Such plans were to cover a period of at least five years; therefore, the initial period was to extend through the 2006-2007 school year.

Fort Worth and Lake Worth ISDs have high schools that fell within the initial HB 400 definition of schools required to implement these plans. The schools initially targeted by the HB 400 Plan (the Plan) were: Diamond Hill-Jarvis High School, Trimble Tech High School, Polytechnic High School (in the Fort Worth ISD) and Lake Worth High School (Lake Worth ISD). In addition to these four HB 400 schools, two other Fort Worth ISD schools were subsequently invited to participate in program activities. They are Carter Riverside and Eastern Hills High Schools.

This analysis will focus on the three Fort Worth ISD HB 400 high schools from which three-quarters of the program participants come.

The primary target groups indicated for this program are those students enrolled in the high schools and the middle schools that feed these high schools. Students representing each of the principal groups addressed by the *Closing the Gaps* initiative comprise the vast majority of students enrolled in these schools. Hispanic and African American students together comprise greater than 95 percent of the student population at each of the three primary Fort Worth HB 400 schools.

[27] Texas Education Code, §29.904. Plan to Increase Enrollment in Institutions of Higher Education.

Selected Student Characteristics of Fort Worth ISD HB 400 High Schools, 2004[28]

High School	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Diamond Hill-Jarvis	4.0%	92.9%	2.8%	79.8%	29.0%
Polytechnic	38.8%	57.1%	2.7%	67.3%	27.3%
Trimble Tech	29.0%	66.2%	3.9%	60.8%	7.6%

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African American, and 38.7 percent were White. 52.8 percent of the students were economically disadvantaged, and 15.3 percent were classified as limited English proficient.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF THE FORT WORTH ISD HB 400 TARGET HIGH SCHOOLS

The goal of the Fort Worth ISD Plan that is directed to the HB 400 schools is stated as follows: "...for each of the high schools...to increase by 5% each of the years 2003, 2004, 2005, and 2006 the percentage of seniors graduating from high school and enrolling for the following academic year in an institution of higher education."[29] ***Therefore the base year for evaluating the Plan would be 2002.***

For 2002, graduates of Diamond Hill-Jarvis High School, Trimble Tech High School, and Polytechnic High School enrolled, in the following fall, in Texas public and private institutions of higher education at a combined rate approximating 25 percent. For the Class of 2004, the fall enrollment in Texas higher education institutions from these schools had increased to 28 percent -- still below the state average but a significant gain in absolute and relative numbers for the three schools, combined. However, the patterns for each over this time period are distinctively different. The following table illustrates this experience.

[28] "2003-04 Academic Excellence Indicator System Campus Reports". Texas Education Agency. 14 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/campus.srch.html.
[29] "Fort Worth Independent School District Plan for Increasing Enrollment in Post-Secondary Institutions Response to House Bill 400". Developed in Collaboration with the Tarrant County College (TCC) and The University of Texas at Arlington (UTA).

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in Fall Following Graduation[30]

High School	2002	2003	2004
Diamond Hill-Jarvis	23.4%	19.1%	17.7%
Polytechnic	25.3%	33.9%	25.7%
Trimble Tech	26.6%	24.6%	33.5%
TOTAL, These Three Fort Worth High Schools	25.4%	25.8%	28.1%
State Average	48.5%	48.5%	48.6%

As the foregoing table illustrates, the positive overall trend is principally attributable to the experience at one school—Trimble Tech.

The median high school-to-college rate for graduates of Texas public high schools for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

Selected Performance Measures for Fort Worth ISD HB 400 High Schools, 2004[31]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% of Grads Found in Higher Education*
Diamond Hill-Jarvis	51.5%	28.7%	3.2%	13.5%	17.7%
Polytechnic	61.1%	50.9%	0.0%	13.4%	25.7%
Trimble Tech	63.4%	44.3%	3.7%	14.0%	33.5%
State Average	68.4%	61.9%	27.0%	19.9%	48.6%

Note: *The 'Found in Higher Education' data are from the preceding table.

[30] "High School to College Linkages". Texas Higher Education Coordinating Board. 14 February 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.
High School graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.
[31] "2004-05 Academic Excellence Indicator System". Texas Education Agency. 14 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/html.

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Program administrators submitted records of 754 students who had participated in the Program in 2003 and 2004 for which there were student identifiers that would permit tracking in the THECB/TEA database. Participants included seniors as well as some juniors from the various schools. The majority of the 11th and 12th graders were from Diamond Hill-Jarvis, Trimble Tech, and Polytechnic high schools. When these records were processed in the Texas Higher Education Board/Texas Education Agency database, high school graduation records were found for 224 participants in 2003 and 341 in 2004.

In 2004, approximately 85 percent of the HB 400 participants were either African American or Hispanic and 62 percent of all participants were listed as economically disadvantaged. A little over two-thirds of the participants (69.8 percent) graduated with the recommended or distinguished diploma.

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

While Fort Worth ISD has Action Plans in place indicating that HB 400 intervention services are to begin with students in the sixth grade and up, the bulk of the services provided by this program have apparently been administered to students in the 12th grade (some 11th graders at Trimble Tech participated in the program in 2003 and while other underclassmen and women may have also participated, it cannot be determined from the data made available to the study).

The partnership agreement between The University of Texas at Arlington, Tarrant County College and the Fort Worth ISD states, in general terms, that UTA and TCC agreed to provide the following ***information*** to high school students: ***applications*** to TCC and UTA; ***financial aid information***; ***admissions information***; entrance exam dates and information; information on programs of interest to students; ***field trips to college campuses***; visits to college classrooms; and direction to UTA and TCC web sites. The aforementioned information is to be disseminated at high school nights/days, education fairs, career fairs, and other community events.

The HB 400 Program provides a range of the **standard set** of possible services. These services include:

- Early information (about preparing for college)
- Family involvement activities

- Academic counseling and advising
- High school-to-college transition activities
- Assistance with college admissions, financial aid, or eligibility/placement tests

Based on interviews with program administrators, the principal intervention that has been initiated by the Program has been the campus visits to Tarrant County College campuses. The Fort Worth ISD has provided transportation to and from three of the TCC campuses (Northeast, Northwest, and South campuses) for a day of sample college classes, tours and lunch. TCC, via these campus visits, provides for: tours led by student ambassadors/volunteers; participation in "mock" college courses taught by TCC professors; meetings with the president, counseling staff and financial aid officers; and lunches hosted by the Enrollment Services Office.

Costs of Services

Estimated Costs of Services Provided by Tarrant County College For the HB 400 Program

Service	2003	2004
Campus Visits		
Total Expenses	$7,500	$6,000
Per Participant Expenses	$14.07	$8.72
Campus Visits - # of Participants	533	688

VI. ADMINISTRATIVE RELATIONSHIPS

Fort Worth ISD has partnered with Tarrant County College (TCC) and the University of Texas at Arlington (UTA) to develop and implement a plan to increase the percentage of the district's graduating seniors who enroll in an institution of higher education in the academic year following their graduation from high school. The five Fort Worth high schools targeted for this program are Diamond Hill-Jarvis, Trimble Tech, Polytechnic, Eastern Hills and Carter Riverside. In addition, there is an arrangement (or has been in the past) with Lake Worth ISD to target Lake Worth High School. For this study, additional data have been provided for Diamond Hill-Jarvis, Trimble Tech, and Polytechnic high schools. Information reported to the survey indicates the following administrative services in place: partnership plans, data-sharing agreements, provision for the use of facilities, and inclusion of representatives in P-12 school activities. The program does not provide for participation release agreements.

A significant aspect of this program involves agreements between Fort Worth ISD and the TCC campuses to provide that numerous dual credit courses are available to the students at the participating high schools. These dual credit courses

encompass most all areas of the "core curriculum" as well as classes in the Tech Prep area including micro manufacturing technology, aviation maintenance technology, fire prevention technology, environmental technology, health science technology, criminal justice, child development, and business and marketing.

VII. SELF EVALUATIONS

The Agreement/Plan between Fort Worth ISD, TCC, and UTA describes a method to measure progress toward reaching the goals of the program. Those tools listed consist of collecting data on the number of students who: are enrolled in a course for which a student may earn college credit including both AP courses and dual enrollment courses; are enrolled in courses that meet the curriculum requirements for the recommended or distinguished high school program; have submitted an application for federal student aid; have graduated from high school; and have taken college entrance examinations. The document states that the data will be reviewed annually to determine that the numbers are increasing across the district as well as in the high schools targeted as low-performing. This study did not obtain the Fort Worth ISD data.

Data for the high school graduation rate, type of diploma obtained, and the proportion of students taking and meeting the criterion scores of the SAT or ACT tests are available online from the Texas Education Agency[32].

High School Graduation Rate

High School	2002	2003	2004
Diamond Hill-Jarvis	81.7%	84.7%	87.1%
Polytechnic	70.9%	73.8%	77.5%
Trimble Tech	95.7%	96.1%	98.8%
Statewide	82.8%	84.2%	84.6%

[32] "Academic Excellence Indicator System". Texas Education Agency. http://www.tea.state.tx.us/perfreport/aeis/.

Percent of Students Who Have
Graduated with Recommended or Distinguished Diploma

High School	2002	2003	2004
Diamond Hill-Jarvis	32.9%	41.8%	51.5%
Polytechnic	47.3%	63.5%	61.1%
Trimble Tech	57.0%	64.6%	63.4%
Statewide	58.2%	63.7%	68.4%

Percent of Class Taking the SAT/ACT *and* Scoring at or
Above the Relevant Criterion Score

High School	2002	2003	2004
Diamond Hill-Jarvis	1.6%	0.7%	0.9%
Polytechnic	1.9%	1.9%	0.0%
Trimble Tech	1.6%	0.4%	1.6%
Statewide	16.5%	17.0%	16.7%

VIII. REPORTED "LESSONS LEARNED"

Several of the administrative participants voiced the following comments/recommendations:

- Students identify more acutely with the classes and environment on the TCC campuses – they know kids there, the curriculum contains more disciplines tailored to "Tech Prep" courses for which many of the students more closely relate, the tuition and fees are more affordable for the students, the campuses are more convenient to the students' neighborhoods, the extended hours of the various classes are more compatible with the students' work schedules, and the campus is generally very "user friendly".

- Administrators, when interviewed, indicated that the program needs to expose students to college opportunities and 'college life' earlier than the senior year - at least the junior year and preferably in middle school.

IX. CONCLUSIONS

This HB 400 Initiative got underway in 2003 and by the 2004 academic year had begun to demonstrate some positive outcomes. Former participants in the program (all targeted schools) enrolled in Texas higher education institutions in the first year following high school graduation at a rate of 38.4 percent in 2003 and 49.0 percent in 2004.

Unfortunately, several of the Fort Worth ISD participating schools still fall within the lower end of the distribution of Texas high schools, with respect to the college-going rates of their graduates[33]. Diamond Hill-Jarvis HS was in the lowest decile of Texas high schools in 2004 and Polytechnic HS ranked in the lowest 20 percent of schools. Trimble Tech HS had improved its position, but at a college-going rate of 33.5 percent in 2004 the school ranked in the lowest quartile.

While participating students appeared to benefit from the campus visits and other aspects of the program, they represented a relatively small fraction of the enrollment of the respective schools. The participants from the three Fort Worth ISD schools represented less than 10% of the total enrollment at these schools in 2003 and 2004.

The improvement in 2004 in the college-going rate for Trimble Tech could be attributed to the fact that in the inaugural year of the program, Trimble Tech was the only school to also enlist junior-level students in the TCC campus visits. These students would have been in the class of 2004 that exhibited the greater college enrollment rates.

[33] This ranking is with respect to the percent of high school graduates who enroll in a Texas public or private institution of higher education in the fall following their graduation. Texas Higher Education Coordinating Board. http://www.txhighereddata.org/Interactive/HSCollLink.cfm

Prairie View A&M University's ACademy for Collegiate Excellence and Student Success (ACCESS)[34]

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

The **AC**ademy for **C**ollegiate **E**xcellence and **S**tudent **S**uccess (**ACCESS**) is a 'bridge-to-college' program that was instituted in June, 1996, by Prairie View A&M University (PVAMU). The goals of the program are to increase college (1) participation and (2) success, measured by enrollment, retention and graduation of students otherwise considered "at-risk" to graduate from college.

The program consists of two components. One is a seven-week long, intensive, residential, summer, pre-college "boot camp". The other component, for those who enroll in PVAMU, involves the students in a freshman year "support service center". The summer camp is designed to enhance the students' academic and personal preparedness for college work, while the freshman year component provides an array of services to enhance the probability that students may 'graduate' from any remedial work they may have undertaken and that they will persist to graduation from the university.

All students who are Texas residents and recent (prospective) high school graduates or GED recipients are eligible to apply for the program. The program seeks students who are highly motivated to succeed in college but who may be academically under-prepared. Many of the students have high school-to-college transitional issues such as limited resources or support from home, are immigrant students, or are from small rural areas. Most students are among the first-generation of their family to seek a college degree and are African American.

Each fall, notices about the program are sent to senior class counselors at every Texas high school. Paper copies of application forms and recommendation forms, one of which must be completed by a counselor, teacher or school administrator, are made available to prospective applicants. These forms are also available on the PVAMU website.

The program now receives between 300 and 500 applications each year for approximately 100 slots that will be filled. An applicant to ACCESS need not also be applying for admission to PVAMU.

[34] "ACCESS". University College. Prairie View A&M University. 16 February 2006. http://acad.pvamu.edu/content/uc/ACCESS.htm.

This study will focus, primarily, on the pre-college summer component of the program.

II. BACKGROUND INFORMATION

To participate in the ACCESS program, a student must:

- Be a Texas resident.
- Have a minimum 2.0 high school cumulative GPA on a 4.0 scale.
- Be a recent high school graduate or GED recipient.
- Be willing to make a serious academic commitment to succeed in college.
- Understand and accept the discipline required for academic success and accept the condition that any act of misconduct or violation of program guidelines is grounds for immediate dismissal.

In addition to these criteria, the university employs several evaluation mechanisms and a selection committee to identify those 'at-risk' students who are highly motivated to succeed in college and who exhibit the greatest potential for success. PVAMU considers such students to be ideal candidates for the program. The tools used to make this determination include[35]:

- ✓ A ***Student Survey*** to predict a student's potential for success based on eight variables that measure whether a student:[36]
    - **Positive Self-Concept**: Demonstrates confidence, strength of character, determination, and independence.
    - **Realistic Self-Appraisal**: Recognizes and accepts any strengths and deficiencies, especially academic, and works hard at self-development. Recognizes need to broaden his/her individuality.
    - **Understands and Knows How to Handle Racism (the System)**: Exhibits a realistic view of the system based upon personal experience of racism. Committed to improving the existing system. Takes an assertive approach to dealing with existing wrongs, but is not hostile to society, nor is a "cop-out." Able to handle racist system.

[35] These mechanisms were identified by the staff of the ACCESS program. They are outlined in a document entitled Methodology for Selecting Applicants for the ACCESS Program.
[36] The eight variables measured by the Student Survey are derived from the research of William E. Sedlacek, Professor of Education, University of Maryland. A discussion of this assessment methodology may be found at: http://www.brevard.edu/fyc/listserv/remarks/sedlacek.htm. 17 January 2006.

- **Prefers Long-Range to Short-Term or Immediate Needs**: Able to respond to deferred gratification, plans ahead and sets goals.
- **Availability of Strong Support Person**: Seeks and takes advantage of a strong support network or has someone to turn to in a crisis or for encouragement.
- **Successful Leadership Experience**: Demonstrates strong leadership in any area of his/her background (e.g. church, sports, non-educational groups, gang leader, etc.).
- **Demonstrated Community Service**: Participates and is involved in his/her community.
- **Knowledge Acquired in or about a Field**: Acquires knowledge in sustained and/or culturally related ways in any field.

✓ ***Recommendations***, at least one of which must come from a school official such as a teacher, counselor, or administrator.

✓ A ***telephonic interview***.

✓ A ***selection committee*** that considers:

- The applicant's citizenship
- The applicant's probability of graduating and passing all sections of the TAAS
- The student's 'under-preparedness' based on: GPA (prefer 2.0-3.1); SAT/ACT scores; class rank; performance on the TAAS; and certain other factors to achieve a balanced group (e.g., geographic, gender, bilingualism, public/private high school education).

As the following table illustrates, students in the program comprise, for the most part, the principal target groups identified by the state's *Closing the Gaps* plan.

Selected Student Characteristics of
All *Access* Summer Component Participants

CHARACTERISTIC	2003	2004
Race/Ethnicity		
African American	72%	76.5%
Hispanic	25%	22.7%
All Other	3%	1%
First Generation College	60%	60%
Average SAT Score	778	N/A
Average ACT Score	16	N/A
Completers Who Subsequently Enrolled at PVAMU	76%	64%*
TOTAL ACCEPTED TO SUMMER PROGRAM	103	137

* As the number of Hispanic students accepted to the program has increased, there has been a decline in ACCESS students attending PVAMU. This may relate to the cost of attending a four year as opposed to a two year school.

Statewide, the high school graduating class of 2003 had an average SAT score of 989; the class of 2004 had an average of 987. The average ACT score for 2003 was 19.9; for 2004, the average was 20.1.

In pursuit of the goal of increasing the probability that the student will enter college and persist to a degree, the strategies of the pre-college summer component of the program include:

- ***Intensive academic enhancement--***
  The students spend over 200 contact hours in classes, workshops and structured study halls during the 7 weeks. The program's curriculum focuses on assessing and improving Math, Reading, Composition, Critical Thinking, and Problem Solving skills, and involves faculty of the university, tutors and mentors. Students also attend weekly field experiences that require them to utilize their critical thinking and problem solving skills. Students also participate in leadership, social and personal development activities, as well as cultural enrichment experiences.
- ***Advisement and Support Services*** that include assistance with major/career advisement; class selection if the student plans on attending PVAMU; assistance with financial aid paperwork and

admissions processes; assistance from mentors; and, referral to other appropriate services.

- A ***Residential Component*** that is structured and focused on academics
- A ***Financial Aid Component*** in the form of a limited number of scholarships for the top students who choose to attend PVAMU

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF STUDENTS IN TARGETED DISTRICTS

The program does not target particular schools or districts; students from all Texas districts are invited to apply.

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Tables illustrating additional information about the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The **AC**ademy for **C**ollegiate **E**xcellence and **S**tudent **S**uccess (**ACCESS**) Program provides the complete range of the standard set of possible services, with the exception of extensive Family Involvement and the provision of Dual Credit courses. These services include:

- Early information (about preparing for college)
- Academic counseling and advising
- Tutoring and mentoring activities
- Development of study and/or academic skills in particular areas
- High school-to-college transition activities
- Assistance with college admissions, financial aid, or eligibility/placement tests
- Participation in cultural, social, or co-curricular activities
- Financial aid

These services are provided in the context of the several strategies outlined in Section II.

The summer component emphasizes the ***Academic Enhancement*** services. All students participate in the services, daily, from 8:00 a.m. until 3:00 p.m., during the 7 weeks of the program. The teachers keep attendance records.

All students take the Self-Directed Search[37] career interest inventory and the Learning and Study Strategies Inventory[38] and the scores are reviewed with the students by the advisors and mentors. There are various cultural experiences such as leadership-training exercises at *ChallengeWorks*[39] at Texas A&M University, success seminars in Houston, visits to foreign consulates, and week-end trips to Austin and San Antonio for various sporting, entertainment, and cultural activities. The program also runs an intramural, coed basketball league.

Participants sign a contract and agree to abide by the program rules which include a curfew, and prohibit phones and TVs in individual rooms. Study and self-discipline are stressed.

Costs of Services

Estimated Costs of Services Provided By Prairie View A&M University's *Access* Program

SERVICE	2003	2004
Regular Summer Bridge Program		
Total Expenses	$379,562	$414,135
Per Participant Expenses	$3,685	$3,023
Special Enrichment Program/Trips (co-curricular activities)		
Total Expenses	N/A	N/A
Per Participant Expenses	N/A	N/A
Financial Aid		
Total Expenses	$13,297	$13,861
Per Participant Expenses	$1,108	$1,155
Regular Program - # of Participants	103	137
Special Enrichment - # of Participants	N/A	N/A
Financial Aid - # of Participants	12	12

Students pay $300 to participate in the summer program. The university pays for the other expenses. The costs are financed from General Revenue appropriations, OCR funding and from grant money.

Survey of Former Participants

Former ACCESS participants were interviewed in the fall of 2005 to gain some qualitative insight into the experiences of these students and their opinions regarding the relative value of the different services they received when in the program. Summaries of these comments are not intended to represent statistically sound

[37] http://www.self-directed-search.com/index.html.
[38] http://www.hhpublishing.com/_assessments/LASSI/.
[39] http://challengeworks.tamu.edu/programs.htm.

appraisals of the program, but merely to provide some additional perception of the workings of the program.

Fifteen students who were presently enrolled in PVAMU were interviewed in a focus group setting. Interviewees also completed the standard questionnaire used with all former participants of the various programs.

Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories, **offered by the program,** with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. On a scale of 1 to 10, with 10 indicating that the service was most helpful to the students, the collective judgment of the students is reflected below:

Participant Opinions Regarding the Helpfulness of Services Provided by the *ACCESS* Program

Service	Score
Cultural/Social/Co-Curricular Activities	9.1
Development of Study and/or Specific Academic Skills	8.7
High School to College Transition Activities	8.2
Assistance with Admissions/Financial Aid Applications	8.2
Tutoring/Mentoring Activities	7.8
Academic Counseling/Advising	7.6
Financial Aid to Attend College (provided by the program)	6.0
Early Information About College	5.6
Family Involvement	N/A
Dual Enrollment/Dual Credit Courses Provided by the Program	N/A

Note: A score of 6.7 or greater indicates that the collective opinion is that the service was *at least* 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments are excerpted from the interviews and surveys:

"In ACCESS we attended classes that helped with reading, writing, math, and vocabulary. These classes also helped with study habits and good time management. All of these skills were/are needed for success in college. "

"ACCESS changed my whole outlook on college and my whole life. At first, I did not want to go to college but ACCESS changed all that. This program gave me self confidence in myself which has made a big difference in my life. ACCESS also taught me great study skills for college, how to manage time, and how to put first things first"

"Helped me to be more open and have faith in myself."

"I wanted to go to college but I just wasn't ready. Through the program I developed fast to adjusting to a college atmosphere."

"ACCESS prepared me with elements I didn't get in high school. It showed me how to study better, live on a college campus and make friends."

VI. ADMINISTRATIVE RELATIONSHIPS

The ACCESS program solicits student interest in the program through communications with high school counselors as well as through a web site and advertising in such publications as Next Step. School teachers, counselors and administrators are involved in recommending participants to the program. ACCESS students attending PVAMU are part of the University College. They are mentored during their first year by a specified professional advisor. ACCESS has received consistent support from the university's administration.

VII. SELF EVALUATIONS

ACCESS maintains records on each participant and has done quite a bit of evaluative work on the program, both in terms of student evaluations and comparative evaluations that track and examine differences between outcomes for ACCESS students enrolled at PVAMU and a matched cohort of other PVAMU students, as well as the experience of all freshmen at PVAMU. The ACCESS administrators examine college-going rates, persistence, grade averages, and graduation rates of their participants. Historically, 83 percent of the ACCESS participants enroll for the freshman year at PVAMU. This number has changed to 76 percent in recent years as administrators have attempted to reach out to a more diverse population that often chooses to start at a two year college.

Data available from PVAMU through the freshman class of 2003-2004 indicate that the ACCESS students attending PVAMU have an average retention rate to the sophomore year of 77.5 percent. During this same time frame their peers have had retention rates that ranged from 64.0 percent to 70.2 percent. Further, the six year graduation rate for ACCESS students has been 39.0 percent. During this same time frame their peers have had graduation rates that ranged from 32.3 percent to 36.9 percent. The ACCESS graduation rate beyond six years is 42 percent.

The ACCESS program has been recognized for the thoroughness of its planning and implementation and its apparent effectiveness in increasing the participation and success rates of its participants. The program received one of the Texas Higher Education Coordinating Board's *Star Awards*[40], in 2003 for its exceptional contributions toward the goals in "*Closing the Gaps",* the Higher Education Plan for Texas. The ACCESS program was a segment of a Fund for the Improvement of Postsecondary Education (FIPSE) dissemination grant on retention, recruitment and

[40]"Star Awards". Texas Higher Education Coordinating Board. http://www.thecb.state.tx.us/StarAward/star1.cfm

remediation. Personnel from four out-of-state universities visited the PVAMU campus to study the pedagogy and operational aspects of the ACCESS program for possible replication at their campuses. ACCESS and the University College are featured as a chapter in Minority Retention: What Works.[41] Presentations on this program have been given at several state and national conferences.

VIII. REPORTED "LESSONS LEARNED"

The program administrators at PVAMU's ACCESS program provided the following information relevant to the program.

- Early interventions can make a difference for students
- Academic focus must be intense and programs must have obvious structure
- Critical thinking and problem solving must be a part of the curriculum and what the students do must have relevance to them.
- Field experiences (outside the classroom activities) are critical to student development. They should have an academic "twist" and they need to push the students outside of their comfort zone.

IX. CONCLUSIONS

The ACCESS program incorporates several of the essential services identified through the Study and appears to bring them to bear in a very effective manner. Notwithstanding the fact that the program purposely seeks out highly motivated students, the program appears to exert a significant, positive impact on the students who choose to participate. Initial enrollment and persistence to the sophomore year rates are significantly greater than for statewide reference groups.

[41] Gaither, Gerald H., ed. Minority Retention: What Works?: New Directions for Institutional Research. No. 125. April 2005.

TEXAS STATE UNIVERSITY RURAL TALENT SEARCH (TRIO) PROGRAM

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

The Texas State University Rural Talent Search (RTS) program began in September of 1995 as a collaborative program between Texas State University and participating school districts in several relatively small communities in Central Texas. The University presently operates the program: in Buda and San Marcos, in Hays County; in Lockhart and Luling, in Caldwell County; and, in Seguin, in Guadalupe County.

The main goal of the program is twofold, "...to encourage and assist youth from disadvantaged backgrounds in the target area to complete high school and to enroll in post-secondary education."[42]

Participating target schools in 2003-2004 include the high schools and their 'feeder' middle schools in the: HAYS CISD, LOCKHART ISD, LULING ISD, SAN MARCOS CISD, SEGUIN ISD. Target schools are initially identified based on assessments of the numbers of economically disadvantaged students who might benefit from the program.

II. BACKGROUND INFORMATION

The National Program

The Rural Talent Search program is one of the federally-funded TRIO programs, administered by the U.S. Department of Education.

Authorized in 1965, the first Talent Search projects began operating in 1967, when Congress appropriated $2 million to fund 45 experimental projects under the Higher Education Act. Initially, Talent Search was described legislatively as a program that identified students with high potential or talent for higher education. The initial language stated that the Talent Search was to identify those with exceptional potential for success in postsecondary education, those who demonstrated aptitude for entry into an educational program, and those who needed guidance, counseling, and assistance in gaining admission or readmission to an educational institution.

Talent Search's mandate was to provide short-term assistance in completing financial aid and college application forms and gaining admission to college.

[42] "Rural Talent Search (brochure)". Texas State University.

Over time, as officials perceived that many eligible students had greater needs, the role of Talent Search in providing supplemental college preparation expanded. Moreover, as the goal of ever-increasing college attendance grew, Talent Search evolved into a program to assist those who requested services rather than a program seeking out those with "exceptional potential." More and more, Talent Search has become the program targeted to those in the middle who might not receive the attention given to the "talented and gifted" or the services delivered to students with special needs.[43]

Talent Search, Summary of National Statistics: 1967–2004[44]

Year	Funding In Millions (Current Dollars)	Funding In Millions (In 2004 Dollars)	Number Of Talent Search Projects	Average Grant Amount (Current Dollars)	Average Grant Amount (In 2004 Dollars)	Total Number Of Students Served	Average Number Of Students Served Per Project
1967	$2.0	$11.3	45	$44,444	$251,464	50,000	1,111
1980	15.3	35.1	167	91,617	210,036	198,817	1,191
1990	26.2	37.9	207	126,570	182,967	199,420	963
2000	100.5	110.2	360	279,291	306,365	320,854	891
2004	144.2	144.2	469	307,527	307,527	382,541	816

The average cost per participant in 2004 is $377. Dollar amounts expressed in 2004 dollars calculated using US Bureau of Labor Statistics Consumer Price Index.

Talent Search Programs in Texas

The Talent Search Program has a substantial presence in the State of Texas. In FY2004, there were 28 Talent Search Programs funded in Texas, at a total cost of $8.2 million. These programs were to serve 21,113 participants, at an average cost of $389 per participant in federal grant funds. The average grant for the Texas

[43] "Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation". U.S. Department of Education, Office of Postsecondary Education. 28 January 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch/chapter2.doc.

[44] "Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation". U.S. Department of Education. Office of the Under Secretary. Policy and Program Studies Service. 28 January 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch/chapter2.doc. (for data through 2000)
"Talent Search Program Funding Status". U.S. Department of Education. 28 January 2006. http://www.ed.gov/programs/triotalent/funding.html. (for 2004 data)

programs was $293,485. In 2000, there were only 17 such programs, serving 14,783 participants.[45]

The Texas State University Rural Talent Search Program

To be eligible for the Texas State University's Rural Talent Search program, a participant must meet all of the following criteria:

- Attend one of the target schools served by RTS in Hays, Guadalupe or Caldwell counties.
- Be enrolled in grades 6 – 12 or be a high school or college dropout with a desire to complete and/or continue one's education.
- Demonstrate a desire and the potential to pursue a college education.

The following are optional qualifying criteria:

- Meet the Federal Income guidelines.[46]
- Be a potential first-generation college student.
- Have a documented disability.

The process of identifying potential participants begins with contacts with the target school administrators and counselors. The program goals, services, and procedures are presented to teacher groups and counselors who are then solicited for recommendations of qualified students who may be interested in participating. Presentations are then made directly to these students and their parents. Parent interviews are also conducted.

Both the students and their parents must complete an RTS Application form, trip permission form, an authorization for medical treatment form, and a Behavior Agreement. Parents are interviewed concerning their educational goals for their children and assessed of their supportiveness concerning their child's participation in RTS. Students complete a "Needs Assessment" form that solicits information about the students' needs in areas such as academic skills, career exploration and college preparedness. Immediately following that, students are given the 'Course Syllabus' and GRADS (Getting ready for Academic Development and Success) form which illustrates the program curriculum for each grade. These activities outline the services that will cover the needs addressed in the RTS Needs Assessment and ultimately serve to support specific program objectives stipulated in the grant and in the annual performance reports.

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[45] "Talent Search Program, Awards". U.S. Department of Education. Office of Postsecondary Education. 26 January 2006. http://www.ed.gov/programs/triotalent/awards.html.

[46] Eligible individuals under this provision are those whose family's taxable income for the preceding year does not exceed 150 percent of the poverty level amount. Currently (January 2006), this figure for a family of four is $29,025; the amounts vary by the size of the family. See: http://www.ed.gov/about/offices/list/ope/trio/incomelevels.html

Students may enter the seven-year program in the 6th grade and are generally from groups underrepresented in higher education. Of the Texas State University's Rural Talent Search program participants in 2004, 44 percent were in middle school, 45 percent in grades 9 through 11, and 10 percent were 12th graders. Seventy-six percent of the participants were either Hispanic or African American students. Seventy-four percent of the participants were classified as low-income and potential first-generation college students (neither parent has at least a bachelor's degree), and 20 percent of the participants were eligible solely because they were potential first-generation college students.[47]

As the following table illustrates, students at the targeted school districts comprise, for the most part, the principal target groups identified by the state's *Closing the Gaps* plan.

Selected Student Characteristics of School Districts Participating in the Rural Talent Search Program, 2004[48]

School District	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Hays	4.3%	52.3%	42.7%	39.7%	9.0%
Lockhart	7.9%	52.4%	39.1%	52.8%	4.3%
Luling	8.8%	51.6%	39.1%	64.6%	7.1%
San Marcos	4.6%	67.7%	26.9%	61.9%	6.2%
Seguin	7.8%	58.9%	32.3%	58.3%	8.8%

State-wide in 2004, 43.8 percent of students in all grades were Hispanic, 38.7 percent were White, 14.3 percent were African American, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

The specific objectives of the program for 2004 were:

1. To select 600 individuals to participate in the program each year
2. To motivate students to stay in school (at least 90 percent of secondary participants are expected to continue in school in the subsequent academic term)
3. To have at least 80 percent of the senior class participants graduate from high school or receive their GED
4. To have at least 70 percent of the graduating class enroll in a program of post-secondary education (for the fall term)

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[47] "Rural Talent Search Performance Report 2003-2004". Southwest Texas State University (now Texas State University).
[48] "2003-04 Academic Excellence Indicator System District Reports". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

5. To provide that 100 percent of the 12th grade and re-entry participants will receive assistance applying for financial aid
6. To have at least 60 percent of eligible participants who have not completed a secondary or post-secondary program re-enter such a program
7. To identify and enroll at least 20 RTS high school participants (at least 6 percent of high school participants in 2004) in summer academic enrichment programs sponsored by post-secondary institutions and other organizations such as the US Hispanic Leadership Conference
8. To provide 100 percent of the junior and senior participants with opportunities to use technology as a communications, research, problem-solving and decision-making tool.[49]

Similar objectives were reported in the previous year.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF STUDENTS IN SCHOOL DISTRICTS TARGETED BY THE TEXAS STATE UNIVERSITY RURAL TALENT SEARCH PROGRAM

The following table illustrates the recent college-going experience for all graduates of high schools in the participating districts.

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in Fall Following Graduation[50]

High School	2003	2004
Seguin	44.5%	42.4%
San Marcos	39.8%	53.3%
Jack C. Hays	44.6%	44.8%
Lockhart	39.6%	41.4%
Luling	33.3%	42.7%
State Average	48.5%	48.6%

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[49] "Rural Talent Search Performance Report 2003-2004". Southwest Texas State University (now Texas State University.

[50] "High School to College Linkages". Texas Higher Education Coordinating Board. 26 January 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm. and
"Texas High School Graduates From FY 2002-2005 Enrolled in Texas Higher Education Fall 2002-2005". Texas Higher Education Coordinating Board. 9 June 2006.
High School graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures For
Rural Talent Search Targeted High Schools, 2004[51]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees at or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% Grads Found in Higher Education*
Seguin	61.0%	57.0%	22.4%	14.6%	42.4%
San Marcos	79.9%	65.0%	22.1%	17.3%	53.3%
Jack C. Hays	73.4%	65.9%	23.8%	18.3%	44.8%
Lockhart	60.6%	60.4%	16.6%	19.9%	41.4%
Luling	73.8%	53.8%	12.2%	10.9%	42.7%
Statewide	68.4%	61.9%	27.0%	19.9%	48.6%

Note: *The 'Found in Higher Education' data are from the preceding table.

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

One concern about the data available through the THECB/TEA database that is used for this study is that it may inadequately reflect the characteristics of Talent Search participants. The data do not reflect the educational attainment status of the parents of the participants. Many of the students served by Talent Search are potential first-generation college students. Such students are particularly challenged when it comes to their prospects for participation and success in college. This very important variable is not captured in the state database and is, therefore, unavailable for analyses of comparable outcomes.

V. SERVICES

The Texas State University Rural Talent Search (RTS) Program provides the complete range of the standard set of possible services with the exception of Dual Credit courses and direct Financial Aid. These services include:

- Early information About College
- Family Involvement in Program's Activities
- Academic Counseling and Advising
- Development of Study/Academic Skills

[51] "2004-05 Academic Excellent Indicator System District Reports". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/index.html.

- High School-to-College Transition Activities
- Assistance with College Admissions/Financial Aid Applications, or Eligibility/Placement Tests
- Participation in Cultural, Social, or Co-Curricular Activities

Other services provided by RTS outside of the standard services include:

- Goal setting, leadership development and self esteem enhancement
- Career skill assessment and exploration
- Time management and other self management training activities

Students are typically recruited to participate in the program beginning in the 6th grade. Each of the three RTS advisors maintain a student caseload of 200 (200 divided by 7 grade levels equals about 30 students per grade level).

The program attempts to enroll 30 students per grade at each target school. The conditions of the grant require that there be at least 600 participants, in total, each year.

As space permits, students may also be recruited to the program in grades 7 through 11. New participants are not taken from the senior classes unless a student has been referred to RTS with high needs. This is allowed through a case by case review.

RTS Advisors have as a task to interact with each student, in a group setting, at least once a month. In addition, Advisors maintain 'office hours' at each school, for approximately eight hours, two days a week. Participants may be 'pulled-out' of class for such consultations. In the early grades (6-9), much of this time is spent exploring career choices and the training and education required. Specifically, this curriculum covers college choices, academic skill development, leadership skill development and self esteem/discovery exercises. In high school, these meetings and workshops become more focused on preparing for post-secondary education and the steps necessary to obtaining admission and financial assistance including test preparatory activities.

College and university field trips for participants begin in the 6th grade, with at least one such trip planned each year the participant is in the program, through high school graduation. Middle school participants are acquainted with what college has to offer and what it will take to be a successful college student. In the 8th grade, participants are counseled about the kind of high school preparation, including the taking of at least the Recommended curriculum, needed to get prepared and to qualify for certain scholarship programs.

For the 10th and 11th grade participants, the focus of the program narrows to identifying career interests and particular colleges that might best address those interests. Students learn the different options available for paying for college, and

how to qualify for Federal Financial Aid, Grants, and Scholarships. They are exposed to the role of college entrance exams in the college admissions process and to how to prepare to perform well on the PSAT, SAT and ACT tests. 10th and 11th graders also work on their writing skills by completing their resumes and college/scholarship essays.

Activities for 11th and 12th - graders participating in the program constitute a major part of the RTS Advisors' Job Duty Checklist. Students actively prepare for the admissions tests, prepare or update resumes, complete one or more college/scholarship essays, complete the FAFSA and begin actively searching for scholarship opportunities. They are also encouraged to explore college majors. Juniors take the PSAT in the fall and the SAT in the spring. Seniors who have not taken the admissions tests are scheduled for the ACT and SAT in the fall of their senior year.

In addition to the annual trips to college campuses, high school participants may qualify for significant, in-state 'enrichment' trips during the summer. Participants also attend career exploratory trips to various companies' and organizations' job sites. Participants have the option to participate in student leadership development conferences throughout the state of Texas. RTS provides travel cost coverage for some of these.

The planning calendar for the year includes, in addition to the typical 'office hours' and group meetings for all students, the following noteworthy tasks for the high school students:

August-September	*Complete* (12th graders) admission application for universities of choice *Register* (10th and 11th graders) for the Preliminary Scholastic Aptitude Test (PSAT)/National Merit Scholarship Qualifying Test (NMSQT) *Schedule* Princeton Review (ACT prep for fall semester and SAT for spring) *Register* (12th graders) for the SAT/ACT Tests *Enroll* in college preparatory classes *Participate* in academic and leadership skill development activities as well as college and career exploration activities
October	*Complete* (12th graders) admission application for universities of choice *Register* (12th graders) for the SAT/ACT Tests *Take* (10th and 11th graders) the PSAT/NMSQT *Complete* (12th graders) scholarship applications *Apply* for summer enrichment programs

	Participate in academic and leadership skill development activities as well as college and career exploration activities
November	*Complete* (12th graders) admission applications for universities of choice *Explore* college choices; *organize/conduct* college visits *Prepare for* early financial aid workshops *Complete* (12th graders) scholarship applications *Participate* in academic and leadership skill development activities as well as college and career exploration activities
December-January	*Complete* (12th graders) admission application for community colleges of choice *Complete* (12th graders) scholarship applications *Prepare and Submit* FAFSA (Participants and Parents) *Register* (11th graders) for SAT/ACT Tests *Participate* in academic and leadership skill development activities as well as college and career exploration activities
February-March	*Complete* (12th graders) admission applications to community colleges of choice *Plan and participate* in preparation classes for the SAT and ACT *Prepare and Submit* FAFSA (Participants and Parents) *Register* (11th graders) for SAT/ACT Tests *Take* SAT test *Participate* in college visits *Apply* (all 12th graders) to at least 2 universities *Complete* (12th graders) scholarship and financial aid applications *Make* parent contacts to seniors' parents, by phone *Prepare for SAT* (11th graders and others in need of service prep) *Participate* in academic and leadership skill development activities as well as college and career exploration activities
April	*Participate* in college visits *Prepare and Submit* FAFSA (Participants and Parents) *Submit* applications to summer enrichment programs *Participate* in academic and leadership skill development activities as well as college and career exploration activities
May	*Participate* in college visits *Submit* applications to summer enrichment programs

	Participate in academic and leadership skill development activities as well as college and career exploration activities
June-August	*Contact* graduates to insure that they follow through with plans for fall enrollment *Participate* in college visits *Participate* in career, college or cultural trips *Participate* in academic and leadership skill development activities as well as college and career exploration activities

- Throughout the fall semester, the program conducts college awareness nights for students and parents
- Throughout the spring semester, the program conducts financial aid nights for parents and students

Survey of Former Participants

Former Rural Talent Search participants were interviewed, in the fall of 2005, to gain some qualitative insight into the experiences of these students and their opinions regarding the relative value of the different services they received when in the program. Summaries of these comments are not intended to represent statistically sound appraisals of the program but merely to provide some additional perception of the workings of the program. The interviews were conducted in a focus-group setting.

Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories, **offered by the program,** with respect to their decisions to go to college and regarding their preparations to succeed once enrolled.

Those interviewed indicated that the three most significant services, in their view, were *High School-to-College Transition Activities, Assistance with Admissions/Financial Aid Applications or Eligibility Tests,* and *Early Information About College.*

The following comments are excerpted from the surveys:

"The element that made the biggest difference is visiting different colleges because when I visited it made my desire to go to college stronger. The program was helpful in filling out FAFSA and Texas Common App because being a first generation student, I felt like I was lost."

"The program helped me see that I could go to college and what I needed to do in order to get there. The college campus tours showed me the difference between types of colleges."

In response to a question about what other services would have been helpful, the following was offered by one of the former participants, *"More one-on-one time with students"*.

Costs of Services

Estimated Costs of Services Provided By Texas State University's Rural Talent Search Program

Service	2003	2004
Regular Program		
Total Expenses	$279,000	$283,754
Per Participant Expenses	$465	$455
Campus (college) Visits		
Total Expenses	$1,000	$1,000
Per Participant Expenses	About $22.00	About $22.00
Summer Enrichment Program/Trips		
Total Expenses	N/A	N/A
Per Participant Expenses		
Regular Program - # of Participants	600	623
Campus (college) Visits - # of Participants	45	45
Summer Enrichment - # of Participants	20	20

Visits to campuses of institutions of higher education typically occur throughout the year. These costs average $1,000 per trip with the average cost per attendee around $22.00.

VI. ADMINISTRATIVE RELATIONSHIPS

The Rural Talent Search program has partnership agreements with the target schools participating in the program. These include: provisions for use of the schools' facilities for in-school meetings with students; agreements providing for students release from class to participate in the program activities; and, provisions to provide access to school records for their students. As stated previously, the schools' teachers and counselors are involved in recommending participants to the program and in subsequent counseling as well.

VII. SELF EVALUATIONS

The Rural Talent Search program prepares an Annual Performance Report that is submitted to the US Department of Education.

This report is prepared using data that the RTS advisors gather throughout the year and in the months following the end of the school year. In addition to the Advisors' own observations, data are obtained from follow-up surveys, contacts with participants' families, and contacts with institutions of higher education. The partnering schools are asked to evaluate the RTS program at the end of each school year. Program participants (who have remained in the program) are tracked through September following their graduation from high school, to determine their higher education enrollment status. **There is no subsequent tracking of students'**

participation or success in higher education. However, beginning with last year's cohort, the program has begun tracking students more comprehensively.

The data address workload matters (e.g., counts of participants and age, grade and demographic characteristics), status issues, and outcome variables related to the 8 specific objectives of the RTS program enumerated above.

Based on the performance report for 2004, all objectives were met, several were exceeded:

1. With ***623*** participants, the program ***exceeded its participation objective***.
2. ***All*** secondary student-participants were retained in school in the subsequent academic term, ***exceeding the program objective*** in this area.
3. With ***all*** of the senior class participants graduating from high school or receiving their GED, the program ***exceeded its objective.***
4. With ***all*** of the graduating class reportedly enrolled in a program of post-secondary education (for the fall term following high school graduation), this ***objective was exceeded.***
5. With ***100 percent*** of the 12th grade and re-entry participants receiving assistance with financial aid applications, the program ***met this objective.***
6. ***All*** eligible participants who were secondary school dropouts, who were served, achieved their GED; the ***objective was exceeded.***
7. The goal of enrolling at least 20 RTS high school participants in summer academic enrichment programs sponsored by post-secondary institutions and other organizations was ***substantially exceeded.***
8. ***All*** junior and senior participants used computers and the Internet as a communications, research, problem-solving and decision-making tool (e.g., to complete the FAFSA, to practice for the SAT and ACT tests, to write resumes and college admission essays, etc.), which ***met the objective*** in this area.[52]

Six of the eight objectives were exceeded. The remaining two had objectives that targeted 100 percent of the participants for a particular service, and in these cases, the objectives were met.

Halfway through each academic year, the program administrator completes a formative evaluation on the program status to determine if the program objectives are being met. Additionally, advisors are evaluated each month on the services they are providing to the students including trips, events, and activities. The director reviews these monthly reports to determine if the advisor's services need improvement in a specific area or if other revisions are needed. The summative evaluation for the program is the APR which is sent to the U.S. Department of Education.

[52] "Rural Talent Search Performance Report 2003-2004". Southwest Texas State University (now Texas State University.

VIII. OTHER EVALUATIONS

In January of 2004, the U.S. Department of Education released the first phase of an ongoing national evaluation of the Talent Search program. The work represents the first national study of the program undertaken since the early 1970s. This report, entitled "Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation"[53], was prepared by Mathematica Policy Research, Inc.

Although the report is fairly comprehensive, the findings repeated in this paper were chosen for their relevance to the state's P-16 Study and, in particular, this Talent Search program.

The National Evaluation

The Department of Education study indicates that Talent Search serves a relatively small percentage of students nationwide who, based on their family income, may be eligible for the program. Overall, the number of Talent Search participants is equal to about 21 percent of the number of students eligible for free lunch (those whose family income is not over 130 percent of the poverty level) in target schools and about 6 percent of that population in *all* schools serving grade 7 or higher.

The front-line staff members, such as counselors and advisors, reportedly spend most of their time – often four days a week - in the field, visiting target schools. The project survey indicated that staff spends, on average, about 46 percent of their time in direct service, including counseling; 24 percent on record keeping, reporting and administration; and 14 percent on participant recruitment.

Compared with a decade earlier, more [Talent Search] projects appear to be providing academic support services such as tutoring, and to a higher percentage of participants.

Apparently, many services are not offered very frequently, do not last very long, and are optional for participants. On average, 38 percent of middle school students and 48 percent of high school students reportedly spent less than 10 hours in program activities during the 1998-1999 program year.

Limited resources sometimes prevented projects from serving as many students as they would have liked or from serving all participants who

[53] "Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation". U.S. Department of Education, Office of Postsecondary Education. 25 January 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch/index.html.

requested a given service. For example, nearly half of all projects were unable to provide tutoring to all students who requested it.

Despite recent modest increases in average funding per participant, Talent Search generally remains a relatively low-intensity program. For the most part, participation in program services is optional; basic services might be offered biweekly or even just once a month, and many students spend less than ten hours in program activities over the course of a year. Overall, the program still adheres to the original assumption that small amounts of service, delivered at crucial times, can make a difference in students' decisions concerning college preparation and enrollment.

Annual performance reports strongly suggest that many students stay in Talent Search a relatively short time – and not just those who join toward the end of high school.

Although anecdotes, especially those offered by current or past participants, are not hard evidence of program effectiveness, it is useful to know how students and alumni perceived that the program helped them. Reported benefits included more knowledge about college and financial aid, better access to and more choice of colleges, improved academic performance, and increased confidence and motivation. Significantly, the study found that "…participants…often felt their Talent Search advisors provided better assistance [than their school counselors]."

Not surprisingly, the issue of resource constraints came up often in both the survey and case studies. Project staff could not do all they wanted to for all their participants.

In all, two hundred sixty directors of Talent Search programs provided their opinions of program activities that they thought contributed most to the achievement of the programs' objectives. Most frequently mentioned by these professionals were *Financial Aid Services*, followed closely by *Campus Visits.* Other services that were noted were: *Tutoring, Assistance with Postsecondary Applications, Career Counseling, Academic Advising,* and *College Orientation Activities.*

These administrators were also asked about the priorities they place on the various services the programs offer and how they would prioritize these services if the program had any additional resources. The target group deemed the greatest priority, both at present and in the case of additional resources, was determined to be the senior high students. In the case of services for their participants, the greatest priority was placed on 'workshops' and 'campus visits'. In terms of the 'likelihood' of increasing emphasis on a particular service if the project had more resources, administrators indicated that the first priority would be to increase time available for Talent Search

counselors to meet one-on-one with participants. The next greatest priority would be to enhance campus visits.

The U.S. Department of Education recently completed its national evaluation of Talent Search programs and concluded that participants in Talent Search programs were indeed more likely than non participants from similar back grounds to be first-time applicants for financial aid and were more likely to have enrolled in a 2-year or 4-year institution of higher education than non participants. Talent Search programs are comprehensive outreach programs that include a focus on services such as college orientation and assistance with financial aid and college admissions applications, as well as others. The national report states, "Practical information – direct guidance on how to complete applications for financial aid and admission to college and what a college campus looks and feels like – may have been one of the key services that Talent Search projects delivered."[54]

IX. REPORTED "LESSONS LEARNED"

Recent changes or new initiatives to the Rural Talent Search Program include implementation of a College Retention Initiative and an increase in the number of college trips/tours to be taken each year.

X. CONCLUSIONS

The Rural Talent Search program is one of a family of similar programs operating in Texas that appear to result in a positive outcome for its participants, particularly with respect to enrollment in college in the first fall following high school graduation. It provides the services considered by many to be the essential elements of a successful intervention program. In 2002, its graduates were found enrolled in Texas colleges and universities at rates significantly greater than the state average for all high school graduates that year, as well as the enrollment rate of a reference group constructed to resemble the demographic characteristics of the program's graduates.

[54] "A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report from Phase II of the National Evaluation". U.S. Department of Education. Office of Planning, Evaluation and Policy Development. Policy and Program Studies Service. Washington, D.C., 2006.

TEXAS TECH UNIVERSITY UPWARD BOUND (TRIO) PROGRAM

I. ADMINISTERING INSTITUTION(S); COLLABORATORS

This particular Upward Bound program is administered by Texas Tech University in Lubbock, Texas. West Texas area school districts participating in the TTU Upward Bound program are listed below.

Collaborating School Districts: High Schools Targeted By The TTU Upward Bound Program

Abernathy ISD	Abernathy High School
Amherst ISD	Amherst High School
Anton ISD	Anton High School
Brownfield ISD	Brownfield High School
Cotton Center ISD	Cotton Center High School
Crosbyton ISD	Crosbyton High School
Floydada ISD	Floydada High School
Frenship ISD	Frenship High School
Hale Center ISD	Hale Center High School
Idalou ISD	Idalou High School
Levelland ISD	Levelland High School
Littlefield ISD	Littlefield High School
Lockney ISD	Lockney High School
Lorenzo ISD	Lorenzo High School
Lubbock Cooper ISD	Lubbock Cooper High School
Lubbock ISD	Lubbock High School, Coronado High School, Estacado High School, Monterrey High School, Matthews Learning Center – New Directions High School
Meadow ISD	Meadow High School
New Deal ISD	New Deal High School
New Home ISD	New Home High School
O'Donnell ISD	O'Donnell High School
Olton ISD	Olton High School
Petersburg ISD	Petersburg High School
Plainview ISD	Plainview High School
Post ISD	Post High School
Ralls ISD	Ralls High School
Roosevelt ISD	Roosevelt High School
Ropesville ISD	Ropesville High School
Shallowater ISD	Shallowater High School
Slaton ISD	Slaton High School
Smyer ISD	Smyer High School
Southland ISD	Southland High School
Spade ISD	Spade High School
Sundown ISD	Sundown High School
Tahoka ISD	Tahoka High School
Whitharral ISD	Whitharral High School
Wilson ISD	Wilson High School

Contained within the Strategic Plan for Texas Tech University's Upward Bound Program is the following mission statement:

> To assist in increasing the recruitment and retention rate of students whose chances for success in post secondary education may have been adversely affected by their socioeconomic backgrounds and/or limited family educational experiences. It is the philosophy of the Department that through proactive quality programs and services, these students will not only succeed, they will excel in their academic endeavors.[55]

Four program goals are also illustrated within the above document. They are as follows:

- **Access and Diversity:** Recruit, retain, and graduate into post-secondary education a larger, more academically prepared and diverse Upward Bound student body.
- **Academic Excellence:** Attain campus and state-wide recognition of academic success experienced by Upward Bound students in their high school classes and in their university classes during the summer bridge program.
- **Technology:** Maximize the use of technology in the delivery of services.
- **Partnerships and Engagement:** Build strategic partnerships and alliances.[56]

II. BACKGROUND INFORMATION

The National Program

Upward Bound is a component of the Higher Education Act of 1965.[57] It is one of three early programs that emerged from the Economic Opportunity Act of 1964 in response to the Johnson administration's War on Poverty. Upward Bound, Talent Search and Student Support Services comprise what is termed the "TRIO" programs – programs that serve as educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. Today, there are more than 700 Upward Bound programs nationwide funded by the U.S. Department of Education with Upward Bound being the largest of the TRIO programs in terms of funding allocations.

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[55] "Department of Upward Bound Programs – Strategic Plan". Texas Tech University.17 February 2006. http://www.studentaffairs.ttu.edu/vpsa/stratplan/ubp_stratplan.pdf.
[56] Ibid.
[57] "Higher Education Act of 1965, 1998 Higher Education Act Amendments". Subpart 2 – Federal Early Outreach Programs and Student Services Programs. CHAPTER 1 – FEDERAL TRIO PROGRAMS SEC. 402A. 20 U.S.C. 1070a-11. 26 January 2006. http://www.ed.gov/about/offices/list/ope/trio/triohea.pdf.

Upward Bound programs are required to deliver their services within the following guidelines:

- Not less than two-thirds of the students participating in the program must be low-income individuals and potential first generation college students.
- The remaining students participating in the program must be either low-income or potential first generation college students.
- A documented need for academic support is necessary in order to successfully pursue a program of higher education.
- Potential program students must have completed 8 years of elementary education and be at least 13 years of age but not more than 19 years of age.[58]

According to a nationwide study conducted by the U.S. Department of Education in 2000-2001, 79 percent of Upward Bound participants were both low-income and potentially first-generation college students; 16 percent were first generation only; and 5 percent were low-income only. The most commonly cited reasons for the need for services for Upward Bound participants were those related to low grades, low achievement scores, and low aspirations (30 percent). The second most commonly reported reason for needing services was lack of opportunity, support, and guidance to take challenging college preparatory courses (20 percent), followed by being a member of a "predominately low-income community (18 percent)".[59]

Nationwide in 2000-2001, the majority of UB participants (57 percent) entered the program as either ninth-graders or rising ninth-graders (i.e., students in the summer between eighth and ninth grades). About one-third (33 percent) entered in the 10th grade, and ten percent entered as 11th graders. Less than one percent entered as rising 12th graders.[60]

Upward Bound Programs in Texas

There is a substantial presence of Upward Bound programs in the State of Texas. In FY 2005, there were 60 Upward Bound programs funded in Texas at a total cost of $20.3 million. These programs served 4,382 participants at an average cost in federal dollars of $4,640 per participant. The average grant for the Texas programs was $338,879. TTU's Upward Bound program is the 6th largest program in Texas in terms of number of participants. UT Pan American, the Houston Community College System, Laredo Community College, Texas Christian University, and the University of Houston operate the larger Texas programs.[61]

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[58] Ibid.
[59] "A Profile of the Upward Bound Program: 2000-2001". U.S. Department of Education, Office of Post-Secondary Education, Federal Trio Programs. 2004. 26 January 2006. http://www.ed.gov/programs/trioupbound/ubprofile-00-01.pdf
[60] Ibid.
[61] "Upward Bound Program – Awards FY 2005". ED.gov. U.S. Department of Education, Office of Post-Secondary Education. 2 February 2006. http://www.ed.gov/programs/trioupbound/ubgrantees2005.xls.

TTU Upward Bound Program

The Upward Bound Program was established at Texas Tech University in 1967 and has provided 38 consecutive years of college preparatory services to economically disadvantaged students in the Lubbock area.

The Texas Tech University Upward Bound program provides college prep classes, academic support services and other activities throughout the academic year. The program has operated a summer residential component since 1967. During both components, students receive academic instruction, tutoring and counseling services and may participate in a variety of social and cultural activities. The academic year program consists of between 24 to 27 academic sessions held weekly on the TTU campus. Instruction is provided in Mathematics, English, Science, Foreign Language, Literature, and College Readiness. The summer program provides an opportunity for enrolled students (high school students) to live in the University's residence halls for one summer session (6 weeks). The program also provides Bridge students (graduating seniors) with an opportunity to implement what they have learned during the program during a summer residential component immediately prior to college entry. Bridge students are enrolled at TTU as freshmen and may earn up to six hours of college credit during the summer program. Non-bridge students (sophomores and juniors) attend academic classes taught by UB instructors and live in the residence halls during the six week summer session.

During the fall of 2003, the Department received funding for a Math/Science Upward Bound (UBMS) program. UBMS is designed to strengthen the math and science skills of participating students. This program is also year-round and also features a summer residential component. Services provided by UBMS include:

- Summer programs of intensive math and science training;
- Year-round counseling and advisement;
- Exposure to university faculty who do research in math and science;
- Computer training; and
- Participant-conducted scientific research under the guidance of a faculty member or graduate student serving as the participant's mentor.[62]

The TTU Upward Bound program is designed to help develop creative thinking and positive attitudes toward learning. Teachers, counselors and other professionals provide counseling services, academic enrichment, and cultural activities which enhance students' potential for success in college. Upward Bound students also receive information regarding financial aid, college enrollment procedures and career

[62] "Upward Bound Math-Science". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 3 February 2006. http://www.ed.gov/programs/triomathsci/index.html.

planning. The staff works with college admission officers, financial aid personnel and others to provide individualized services to the UB student.

TTU Upward Bound students are admitted to the program during their sophomore or junior year of high school. Students are recommended by high school teachers and counselors and are selected on the basis of having academic potential and a desire to pursue higher education. Students are eligible for the Upward Bound program if they are first generation students and/or from a low-income family. According to the program's grant guidelines, 80 percent of the participants must come from both a first generation and a low income family, while 20 percent of the participants can either be first-generation or from a low-income family. Students must live within a 50 mile radius of Lubbock. The determinants for targeting specific schools or school districts include low-income communities, rural communities and communities with a lack of resources to prepare students for college. Students do not have to have a certain grade average to be eligible to participate in the program.

According to the Invitational Priority Ranking Sheet used by TTU UB staff to evaluate potential students, more points are awarded toward admittance into the program to students who meet the following criteria: low income and first generation, a need for program services, probability of attending or succeeding in college is low, gender/ethnic group is under-represented in the program, high school or junior high is under-represented in the program, student is from a single parent family, student is a parent, student is on public assistance/free lunch, student has been referred from a social service agency, student is a ward of the court, student's first language is not English, and the parent education level is less than high school completion.

Selected Characteristics of the Largest Selected TTU Upward Bound Target High Schools (in Terms of the Number of Participants), 2004[63]

High School	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficiency
Plainview	6.7%	61.9%	30.5%	44.3%	4.7%
Lubbock	7.7%	53.0%	35.1%	39.0%	1.5%
Lubbock Coronado	5.8%	22.2%	70.3%	17.8%	0.2%
Anton	2.9%	46.5%	50.6%	52.9%	5.2%
Lubbock Estacado	52.0%	42.5%	5.4%	78.5%	2.2%
Slaton	7.4%	52.5%	39.6%	40.7%	2.5%

[63] "Academic Excellence Indicator System". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/index.html.

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African American, 38.7 percent were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE OF ALL GRADUATES OF SELECTED TARGET HIGH SCHOOLS PARTICIPATING IN THE TTU UPWARD BOUND PROGRAM

The college-going rates in 2004 of three of the six high schools identified in the table below (in terms of percentages of UB participants) exceeded the overall state college-going rate of 48.6 percent. Two high schools are slightly below this rate. One high school, Lubbock Estacado, is well below the state rate. Estacado High School has a student population which is 95 percent ethnic minority and an economically disadvantaged population of 78.5 percent. However, 70.3 percent of their senior student population graduated under the Recommended Plan in 2004.

Percent of Graduates of Selected TTU Upward Bound Target High Schools Found in Texas Public and Private Institutions of Higher Education in the Fall Following High School Graduation[64]

High School	2003	2004
Plainview	55.6%	46.7%
Lubbock	43.2%	44.1%
Lubbock Coronado	53.5%	50.0%
Anton	----------	67.9%
Lubbock Estacado	28%	26.4%
Slaton	50%	52.8%
State Average	48.5%	48.6%

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[64] "High School to College Linkages". Texas Higher Education Coordinating Board. 26 January 2006. http://txhighereddata.org/Interactive/HSCollLink.cfm.
High School graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures of High School Graduates From TTU Upward Bound Targeted High Schools (in Terms of UB Participants), 2004[65]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% of Grads Found in Higher Education*
Plainview	73.8%	50.9%	19.7%	13.3%	46.7%
Lubbock	71.4%	56.6%	45.2%	40.6%	44.1%
Lubbock Coronado	67.2%	62.1%	35.9%	41.9%	50.0%
Anton	90.3%	65.5%	21.1%	0.9%	67.9%
Lubbock Estacado	70.3%	54.0%	6.3%	21.4%	26.4%
Slaton	52.8%	66.1%	31.7%	19.1%	52.8%
State Average	68.4%	61.9%	27.0%	19.9%	48.6%

Note: *The 'Found in Higher Education' data are from the preceding table.

IV. OBSERVATIONS FROM THE DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The TTU Upward Bound program provides an academic based, service-rich curriculum to its participants. During the academic (program) year, students meet for 25 academic sessions held on Saturdays. There is also a 5-6 week intensive summer residential component held on the TTU campus.

During the recruiting process prior to student placement, staff members review potential applicants' high school transcripts, class schedules, test scores, income information, counselor recommendations and interview notes to determine the extent of the students' academic and social needs. Individual student profiles are then prepared. Assessment Pre-Selection Interviews are conducted to help further assess the students' needs for services provided by the program. Upon entry to the program, Education Action Plans are prepared for each student entering the program. These plans include an overview of the student's academic and social needs, as well as action steps and time tables.

[65] "2004-2005 Academic Excellence Indicator System". Texas Education Agency. 3 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/index.html.

The varied services offered by TTU Upward Bound are categorized within the ten standard service elements below.

- **Early Information About College**
  - Students are typically recruited to the UB program during their sophomore year of high school.

- **Family Involvement**
  - The Parent Advisory Council meets with the director periodically throughout the program year and all parents are council members. Parents are encouraged to give input about the implementation of program policies and activities.
  - Parent/Student Interviews are part of the UB selection process. Parents are required to attend student selection interviews. During the interviews, parents are given an overview of the services provided by UB and are informed of the program's expectations for both the student and the parent.
  - Parent/Student Financial Aid Conferences are scheduled during the spring semester of the senior year. The sessions are designed to acquaint students and parents with the financial aid process and provide a summary of expenses for the upcoming college year.
  - Student Progress Reports to Parents are prepared at mid-term for all students in the UB program. These evaluations include comments regarding each student's use of time, the quality of their work and their attitude.
  - The Parent's Reception is held during the fall semester. This reception is designed to introduce parents to the UB staff, demonstrate the willingness of the staff to work with the parents in addressing the students' needs and encourage parental involvement and to reiterate the goals and expectations of UB.

- **Academic Counseling/Advising Activities**
  - Academic advising takes place throughout the academic year and summer component and is available to all UB students. Academic counseling involves goal setting, grade and test score evaluations, managing academic problem areas, and in depth advising regarding academic strategies for success.
  - Personal Advising is offered continuously during the academic year and summer component and addresses behavioral problems, personality conflicts and individual issues related to successful participation in the program.
  - Career Counseling takes place during the academic year and the summer component and involves participation in discussions regarding prospective career goals. Students interact with college students and professionals who are involved in a career that is similar in nature to one the student expresses an interest in.

- Student Meetings are held weekly during the academic year and the summer component and include reminders of deadlines, upcoming activities and announcements of program rules regarding student behavior. Guest speakers are often invited to address the students at these weekly meetings.

- **Mentors or Tutors Provided by the Program**
  - Individual Tutoring is available to all students during the academic year and the summer component. These sessions are available upon request or when grade reports reflect non-passing grades. Tutoring sessions are required until grades show satisfactory improvement.
  - TAAS/TAKS Tutoring Labs are mandatory and provided to all students needing help in successful completion of all areas of these tests.
  - Bridge Tutoring Labs are mandatory study labs for bridge students during the six week summer session. The labs are structured based on the actual classes in which the bridge students are enrolled.
  - Bridge Study Groups are scheduled on an as-needed basis and are held throughout the six week summer session.
  - The Pre Professionals and Mentoring Class allows students to participate in lectures by guest speakers and professionals from within the campus community. The mentors provide students with opportunities to interact with professionals on the job site, attend career workshops and develop career objectives.

- **Development of Study Skills or Special Academic Skills**
  - College Prep Composition Class – emphasizes the writing process focusing on word usage and grammar.
  - College Prep Mathematics Class – designed to reduce math anxiety, to reinforce basic math skills, and to introduce new concepts and applications. It provides a review of the following: fundamental operations with real numbers, arithmetic of integers, fractions, decimals and percentages, measurement systems, and simple equations using basic algebra and geometry. Advanced math students receive instruction in trigonometric function and equations.
  - College Prep Literature Class – designed to cultivate and foster an appreciation for literature and reading and to promote the development of effective reading, vocabulary, and comprehension skills.
  - College Prep Lab Science Class – offers lab, field, and classroom experiences designed to enhance the students' high school biology and chemistry curriculums and to introduce students to areas of scientific study they may encounter at the postsecondary level.
  - Foreign Language Spanish Class – provides basic instruction in standard Spanish and is also designed to reinforce Spanish language skills and to increase the fluency of the program's native Spanish speakers.
  - Foreign Language Exchange Class – introduces students to an array of languages not typically available to high school students including

Chinese, Arabic, Japanese, and Turkish among others. The goal is to foster and encourage an appreciation for world diversity and linguistic styles.
    - First Saturday of the Month Days – include academic enrichment activities designed to enhance the regular UB curriculum.

- **High School to College Transition Activities**
    - College Prep 101 – promotes development of college survival skills such as life skills, study skills, basic interpersonal skills, and critical thinking skills.
    - Summer Bridge Classes – offered during the summer to recent high school graduates. These students are enrolled in regular college classes usually in core courses such as English and math.
    - Campus visitations are scheduled by UB staff to allow students to visit campuses of various higher education institutions. These visits are designed to acquaint students with other colleges and to demystify the college experience.

- **Assistance with College Admissions or Financial Aid Applications or Eligibility/Placement Test Preparation**
    - Student Financial Aid Counseling is provided to each graduating senior on an individual basis at the beginning of the spring semester. This counseling is designed to acquaint the student and the parent with the financial aid process, help the student gain an understanding of methods for choosing particular colleges, and to provide a summary of expenses for the college student. Extra focus is placed on the completion of the FAFSA.
    - The Scholarship Workshop is an activity in which UB students complete scholarship applications to be submitted for scholarship awards. During the beginning of the spring semester, UB students and staff set an annual scholarship goal that historically has determined that at least half of the eligible graduating seniors receive college scholarships.

- **Cultural, Social or Co-Curricular Educational Activities or Events**
    - Cultural Events are an on-going enrichment component of the UB program. UB encourages student participation in a variety of cultural activities such as concerts, recitals, festivals, cultural celebrations and parades. The program may purchase tickets to these events for UB students or make a special effort to obtain complimentary tickets.
    - Extra Curricular Interest Classes – designed to provide hands-on opportunities for students to explore special areas of interest. In the past these classes have included criminal law, flight simulation, architecture, chess, veterinary medicine, archery, photography, cooking, karate, anatomy, and horseback riding.
    - Social activities are events designed to promote student interaction outside the classroom setting and to promote fun activities requested by

the students. Social activities include such events as the Annual Christmas Party, student mixers and the talent show.
    - Student Government Officers are nominated and elected by the UB students each academic year. Meetings are held throughout the academic year and are designed to plan student-led activities and bring student concerns to the attention of staff.

- **Financial Aid to Attend College Provided by the Program**
    - The UB Parent Council and the Ex-Upward Bound Student Association sponsor fundraising activities throughout the school year to contribute monies to college scholarships that are awarded to deserving Upward Bound participants.
    - Upward Bound participant graduatess who participate in the Bridge program in the summer following high school graduation receive financial assistance with tuition and fees for TTU coursework taken.

Student Follow-Up is conducted throughout the program year and is designed to track students over a six-year period after they leave the program. The goal of this endeavor is to follow participant graduatess through their college experience. Institutions are contacted for written verification of enrollment and the alumni association, parents, grandparents and other relatives are contacted to help locate former students.

→ **The TTU UB Director and Staff rank the following services in order of importance relative to positive postsecondary outcomes for their participants:**

- College preparatory curriculum (a.k.a., **Development of Academic/Study Skills**)
- Summer residential and summer bridge program (a.k.a., **High School-to-College Transition Activities**)
- Academic advisement and admission and financial aid application assistance (a.k.a., **Assistance with College Admission or Financial Aid Applications**)

Survey of Former Participants

In the fall of 2005, there were 7 former TTU Upward Bound participants who were surveyed by mail and 12 former participants who were surveyed through interviews conducted in a focus-group setting. All of these students were currently enrolled in college. Their responses to the services provided by UB are illustrated below.

Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories, offered by TTU Upward Bound, with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. These opinions have been summarized on the basis of a scale of 1 to 10, with 10 indicating that the service was most helpful to the students. Summaries of these comments are not intended to represent statistically rigorous appraisals of the program

but merely to provide some addition perception of the workings of the program. Accordingly, the collective judgment of the students is reflected below:

Participant Opinions Regarding the Helpfulness of Services Provided by the TTU Upward Bound Program

Service	Collective Score
Assistance with College Admissions or Financial Aid Applications, or Eligibility/Placement Test Preparation	10.0
High School to College Transition Activities	9.8
Cultural, Social or Co-Curricular Educational Activities or Events	9.1
Financial Aid To Attend College Provided by the Program	8.9
Family Involvement	8.9
Academic Counseling/Advising	8.4
Development of Study Skills or Special Academic Skills	8.4
Early Information About College	7.7
Mentors or Tutors Provided by the Program	7.4

Note: A score of 6.7 or greater indicates that the collective opinion is that the service was *at least* 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments from the students are excerpted from the surveys:

"Upward Bound helped me to prepare for college more than any other source including high school counselors."

"I had always planned to go to college but I never knew how I was going to get there until I joined UB. They helped me to understand how I could go to college and get financial aid."

"The fact that college was viewed as an 'expectation' rather than a choice in this program influenced me greatly to want to further my education."

"It makes you feel that you can actually be someone and make a difference."

"…I thank God each day for the opportunity to have participated in it."

Costs of Services

Estimated Costs of Services Provided By the Texas Tech University Upward Bound Program

Service	June 03-May 04
Regular Program Expenses	$282,571
Student Stipends	$30,980
Bridge Student Summer Tuition	$23,304
Summer Room and Board	$73,091
Indirect Costs	$22,606
Regular Program - # of Participants	102
Summer Bridge Program - # of Participants	22
Summer Residential Component - # of Participants	75

Summary of TTU Upward Bound's Financial Statistics, FY 2003-2004

Total Funding	Number of Participants Served	Cost Per Participant
$432,552	102	$4,241

VI. ADMINISTRATIVE RELATIONSHIPS

TTU Upward Bound staff indicate that there are agreements in place to share information (data) about the UB students with high school staff and vice-versa. There are also provisions to allow the UB staff to come on the high school campuses to recruit prospective participants. High School counselors are involved in the preparation of student recommendations to UB staff and UB staff can attend counselor conferences with their students.

VII. SELF-EVALUATIONS

The TTU Upward Bound program is required, as are all other Upward Bound programs, to submit to the U.S. Department of Education an annual performance report by November 30 of each year. In the report filed by TTU Upward Bound for the 2003-2004 academic year, the program met or exceeded 4 of 5 objectives that had been determined for the program year. Those objectives and outcomes are illustrated below.

TTU Upward Bound Annual Performance Report, 2003-04

Measure	Objective	Performance
Grade Level Improvement	70% of all students will achieve at least a 0.2 grade level of academic growth	50 students achieved 0.32 years of academic growth; 28 students achieved at least 0.2 years of growth. Objective Exceeded
GPA Increase	70% of all students will achieve a 0.2 increase in GPA	41% of students achieved a 0.2 increase in GPA. Objective Not Met
Program Retention	80% of participants will be retained in program through next academic year or will graduate high school	90% of participants graduated from high school or returned for the next program year. Objective Exceeded
Post-secondary Matriculation	90% of high school seniors will enroll in college the year after graduation	94% of graduating seniors enrolled in a post-secondary institution in the year following graduation. Objective Exceeded
Post-secondary Completion	60% of participants who have matriculated to college will graduate college within 6 years.	62% of referenced students graduated from an institution of higher education within 6 years. Objective Exceeded

VIII. OTHER EVALUATIONS

National Evaluation of Upward Bound Conducted by Mathematica Policy Research, Inc. for the U.S. Department of Education[66]

Beginning in December of 1991, Mathematica Policy Research, Inc. commenced a national evaluation of Upward Bound for the U.S. Department of Education. The three follow-up studies were collected in 1994-1995, 1996-1997, and 1998-2000. The results referenced here are from the third follow-up data collection summary which was completed in 2004. This evaluation was designed to test whether students in regular Upward Bound experienced better postsecondary outcomes than if they had participated in other available, but typically less intensive, precollege programs.

Mathematica researchers designed the study to include 67 (out of 727) regular Upward Bound programs around the nation. These 67 programs were administered by two- and four-year colleges; the researchers excluded other "specialty" Upward Bound programs from the study.

[66] "The Impacts of Regular Upward Bound: Results from the Third Follow-Up Data Collection – 2004". Mathematica Policy Research, Inc. U.S. Department of Education. 27 January 2006. http://www.ed.gov/rschstat/eval/highered/upward/upward-3rd-report.pdf

Approximately 1,500 eligible Upward Bound applicants from the 67 programs were randomly assigned to the Upward Bound project while another 1,300 of the eligible applicants to the 67 programs were randomly assigned to a control group. To defend the scientific validity of the study, researchers pointed out that students in the treatment and control groups had the same opportunities to pursue other services as the typical eligible applicant to Upward Bound. Because all students in the study theoretically had the chance to pursue help from programs outside Upward Bound, it was anticipated by the researchers that the students' success outcomes revealed the value-added component of regular Upward Bound.

Researchers analyzed the effects on college success indicators for the control group and treatment group as a whole; statistically significant effects were not found, or were unclear. The authors then looked for statistically significant effects within subgroups. The subgroups were defined by the following characteristics:

1. Educational expectations[67]
2. Academic risk
3. Program eligibility
4. Race and ethnicity
5. Sex
6. Likelihood of admission to Upward Bound per rating scale

The researchers used certain college "milestones" as measurements of success. Some of these measurements included: college enrollment at a two- or four-year college, number of remedial courses taken, financial aid awarded, and participation in college activities. When exposed to Upward Bound, researchers found that students with initially lower educational expectations had a greater likelihood of enrolling in four-year postsecondary institutions and that these students experienced a substantial increase in average credits earned, from 11 to 22 credits, at a four-year institution when compared to those in the control group. In fact, Upward Bound more than doubled the percent attending four-year colleges from 18 percent to 36 percent for these students with lower educational expectations. However, Upward Bound had no effect on credits earned at four-year colleges by those students with higher educational expectations.

In an attempt to estimate the effect of duration in Upward Bound on student success, Mathematica researchers matched students who stayed in Upward Bound for shorter periods with similar students who participated in the program for longer periods. The median length of time students remained in the program amounted to 19 months. The earlier students joined the program, the longer they tended to remain in the program. The researchers noted that when lower-duration students (participation less than two years) added a year of participation onto their duration, postsecondary enrollment rates rose nine percentage points and the average number of postsecondary credits earned

[67] Lower educational expectations were defined as expecting to complete less than a bachelor's degree and higher expectations included completing a bachelor's degree or higher. About 20 percent of the eligible program applicants had lower expectations. Special attention was paid to this particular subgroup.

by this group increased by as many as nine credits. Based on these results, the researchers suggested that Upward Bound directors focus on improving student retention.

In March of 2002, The Pell Institute for the Study of Opportunity in Higher Education released a report entitled "Issues Related to the Report of Mathematica Policy Research, Inc, Entitled Final Report of the National Upward Bound Evaluation (April 1999)".[68] In this report, the authors questioned the validity of the control group used for the Mathematica study. The problem they found was with the universe from which the control group subjects were chosen from. The fact that the control group was chosen from students who had already self-selected themselves for Upward Bound meant that these students were equally motivated to seek assistance for postsecondary education and were, therefore, seeking and possibly receiving services similar to those of Upward Bound students. It was the Pell Institute authors' opinion that a more justifiable control group should have consisted of students chosen from schools where Upward Bound was not available, thereby reducing the bias of Upward Bound for school and student behaviors of the control group subjects .

The Pell Institute authors also mentioned that an important finding by Mathematica, the positive effect of UB on low-income, first-generation subgroups, indicates that the Upward Bound program "does meet its political mandate of improving the readiness for college for this group of students".

IX. CONCLUSIONS

The success of TTU's Upward Bound program is striking when one compares its student successes with those of all other high school graduates and with those high school graduates with similar racial/ethnic/social characteristics. Its comprehensive multi-service approach tends to bolster the view that intensive, one-on-one interventions provide the means for college matriculation and success. The Study has found that 100 percent of the 2003 Upward Bound graduates were enrolled in Texas institutions of higher education in the fall following high school graduation. Of those students, 89.5 percent were found to have persisted to a second year of college. Upward Bound's experience has also been contrasted with the 52.4 percent of all Texas graduates (those with valid student identifiers) who were found enrolled in the first fall following high school graduation. Upward Bound's rate of 100 percent is 191 percent of the statewide rate and is, therefore, 91 percent ***greater than*** the rate for all high school graduates. Similarly, when compared to a reference group weighted to resemble the largely Hispanic and economically disadvantaged caseload of this Upward Bound program, the relative performance is even more striking. The Upward Bound program's students are found to be enrolling at a rate 126.6 percent ***greater than*** the program's reference group.

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[68] "Issues Related to the Report of Mathematica Policy Research, Inc., Entitled Final Report of the National Upward Bound Evaluation (April 1999)". The Pell Institute for the Study of Opportunity In Higher Education. 12 February 2006. http://www.trioprograms.org/availableresearch/UBMathematica ResponseRevised1.doc

THE UNIVERSITY OF TEXAS AT AUSTIN
UNIVERSITY OUTREACH CENTERS

I. PROGRAM NAME; ADMINISTERING INSTITUTION(S); COLLABORATORS

The University Outreach Program began in the fall of 1987 as a collaborative program between The University of Texas at Austin, Texas A&M University, and participating school districts in several metropolitan areas of Texas. While Texas A&M University ended its participation in the Outreach Program in 2004, The University of Texas at Austin continues to operate the University Outreach Centers (UOCs) in Austin, Dallas, and McAllen (serving the Rio Grande Valley) that it has historically managed, and now also operates Centers in Houston and in San Antonio (in collaboration with UT San Antonio).

The main goal of the program is to inspire, motivate, and assist low-income and potential first-generation college students to finish high school, to prepare for college, and to assist them in gaining admission to a college of their choice. Students enrolled at target schools are typically either African American or Hispanic, economically disadvantaged, and those whose parents do not have college degrees.

Students typically enter the five-year program in the 8th grade. Of the UOC participants who were found to have graduated from a Texas public high school in 2004, 95 percent were either Hispanic or African American students. Almost two-thirds of the graduates were also classified as economically disadvantaged.

Participating target schools in 2004-2005 now include selected high schools[69] and their 'feeder' middle schools in: the Austin ISD; Dallas ISD; Houston ISD; the McAllen, Mission, Pharr-San Juan-Alamo, and San Benito school districts in the Rio Grande Valley; and the Harlandale and San Antonio ISDs in Bexar County.

II. BACKGROUND INFORMATION

While the criteria are somewhat flexible, to participate in UOC a student must:

- be a first-generation college-bound student
- be enrolled in a participating middle or high school

[69] High schools include: Akins, Austin, LBJ, Lanier, McCallum, Reagan, and Travis in the Austin ISD; Carter, Kimball, Lincoln, Madison, A. Maceo Smith, Roosevelt, and Skyline in the Dallas ISD; Chavez, Jones, Madison, Milby, and Sterling in the Houston ISD; McAllen, Memorial, and Rowe in the McAllen ISD; Memorial in the Mission CISD; PSJA, PSJA North, and PSJA Memorial in the Pharr-San Juan-Alamo CISD; San Benito in the San Benito CISD; Fox Technical and Lanier in the San Antonio ISD; and, Harlandale and McCollum in the Harlandale ISD.

- pursue the Texas Education Agency's Recommended Curriculum or an advanced curriculum
- maintain a cumulative grade point average in the A to B range in grades 8-12
- have the recommendation of a teacher or counselor
- have parental approval and support

Teacher/counselor recommendations are reported to be among the more important of these criteria.

As the following table illustrates, students at the currently targeted school districts comprise, for the most part, the principal target groups identified by the state's *Closing the Gaps* plan.

Selected Student Characteristics of School Districts With UOC Participants, 2004[70]

School District	% African American Students	% Hispanic Students	% White Students	% Economically Disadvantaged Students	% Limited English Proficient Students
Austin	13.6%	53.1%	30.3%	55.6%	21.8%
Dallas	31.3%	61.0%	6.3%	79.5%	31.6%
Houston	29.8%	58.1%	9.1%	81.7%	29.0%
McAllen	0.6%	89.3%	8.2%	69.5%	36.3%
Mission	0.2%	97.8%	2.0%	84.3%	27.6%
Pharr-San Juan-Alamo	0.2%	98.6%	1.2%	90.0%	40.1%
San Benito	0.2%	97.9%	1.8%	83.9%	25.2%
Harlandale	0.5%	94.8%	4.4%	89.4%	15.0%
San Antonio	8.8%	87.2%	3.6%	90.0%	17.0%

Statewide, in 2004, 43.8 percent of students in all grades were Hispanic; 14.3 percent were African American; 38.7 percent were White; 52.8 percent were economically disadvantaged, and 15.3 percent were classified as limited English proficient.

[70] "2003-04 Academic Excellence Indicator System District Reports". Texas Education Agency. January 25, 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

The objectives of the program are:

- To motivate students to stay in school
- To provide information and guidance needed to achieve college admission
- To improve grades/attendance /behavior
- To promote citizenship
- To allow for career exploration
- To provide positive role models
- To improve test-taking skills
- To provide positive social, cultural, and educational activities
- To help students develop a positive self-concept

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF STUDENTS IN TARGETED DISTRICTS

The following table illustrates the recent college-going experience for *all* graduates of *all* high schools in the districts that are currently participating.

Percent of Graduates of UOC Targeted Districts Found Enrolled in Texas Public and Private Institutions of Higher Education in the Fall Following High School Graduation[71]

School District	2003	2004
Austin	44.0%	45.1%
Dallas	32.5%	35.5%
Houston	34.9%	34.6%
McAllen	57.0%	57.4%
Mission	47.8%	50.6%
Pharr-San Juan-Alamo	46.5%	51.5%
San Benito	49.0%	50.9%
Harlandale	43.9%	44.3%
San Antonio	45.3%	46.0%
State Average	48.5%	48.6%

[71] "High School to College Linkages". Texas Higher Education Coordinating Board. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.
High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

Performance Measures of Selected School Districts Participating in the University Outreach Centers Program, 2004[72]

School District	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/ Dual Enrollment Completion	% of Grads Found In Higher Education
Austin	69.6%	72.0%	40.2%	25.0%	45.1%
Dallas	81.0%	53.5%	10.6%	19.9%	35.5%
Houston	79.5%	65.2%	22.8%	21.3%	34.6%
McAllen	76.9%	74.4%	16.0%	15.2%	57.4%
Mission	74.4%	51.5%	9.5%	35.7%	50.6%
Pharr-San Juan-Alamo	87.9%	78.8%	3.3%	24.1%	51.5%
San Benito	79.7%	56.5%	3.1%	12.8%	50.9%
Harlandale	79.2%	43.3%	4.0%	17.2%	44.3%
San Antonio	76.6%	62.8%	4.6%	18.1%	46.0%
State Average	68.4%	61.9%	27.0%	19.9%	48.6%

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

For the purposes of the statistical analyses in this section, the study has focused on the three centers that have been traditionally managed by The University of Texas. These are the Austin, Dallas, and Rio Grande Valley University Outreach Centers. These Centers have served the Austin, Dallas, McAllen, Mission, Pharr-San Juan-Alamo, and San Benito school districts.

Analyses of the outcomes for graduates of the University Outreach Program indicate college-going rates in the first fall and first year following graduation that are greater than the average for all Texas high school graduates as well as for reference groups that reflect the racial/ethnic and economic status of the participants of the program.

[72] "2004-05 Academic Excellence Indicator System District Reports". Texas Education Agency. January 25, 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/district.srch.html.
"High School to College Linkages". Texas Higher Education Coordinating Board. January 25, 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm (for enrolled in higher education).

University Outreach Centers
Participant Graduates Found Enrolled in Texas Institutions of Higher Education in the Fall Following High School Graduation, the 1st Year Following High School Graduation, and Those Found in the 1st Year Following High School Graduation Who Persisted To the 2nd Year[73]

UOC Program Participant Graduates	HS Class of 2002	HS Class of 2003	HS Class of 2004
Percent Found in the Fall Following HS Graduation	64.3%	67.5%	64.3%
Percent Found in the 1st Year Following HS Graduation	72.5%	73.4%	70.7%
Percent Enrolled in the Year Following HS Graduation Who Persisted To 2nd Year	87.0%	82.1%	N/A

The rates at which graduates of the University Outreach Centers are enrolling in Texas colleges and universities in the fall and first year following graduation exceed the experience of all Texas high school graduates for the years 2002, 2003, and 2004. When compared to a reference group constructed to reflect the racial/ethnic and economic characteristics of these students, the apparent college-going performance of these graduates is even more striking. The table that follows illustrates these performance margins which, for the most part, are statistically significant.

To obtain these measures, the respective rates at which the UOC program graduates are found in higher education are divided by the "all Texas high school graduates" college-going rates and by the respective reference groups' rates. From the result of this procedure, 1.0 is subtracted to gain the rate by which the program group is *greater* (or *less*, if the result is negative). A resulting positive value indicates the rate at which the program groups' students' college-going rate exceeds the reference groups'.

Other tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

[73] These statistics have been developed from data obtained from the Texas' public school and higher education student database maintained by the Texas Higher Education Coordinating Board, June 2006.

Participant Graduates Found Enrolled in Texas Higher Education Compared to All Texas H S Graduates and to H S Graduates with Similar Racial/Ethnic and Economic Characteristics[74]

UOC Program Participant Graduates	UOC Class of 2002	UOC Class of 2003	UOC Class of 2004
Found in the Fall Following HS Graduation			
a. Percent Greater Than All HS Graduates	22.8%	29.0%	22.7%
b. Percent Greater Than Reference Group	52.7%	56.4%	44.0%
Found in the 1st Year Following HS Graduation			
a. Percent Greater Than All HS Graduates	22.7%	24.5%	19.8%
b. Percent Greater Than Reference Group	44.0%	44.3%	35.9%
Those Who Persisted to a 2nd Year			
a. Percent Greater Than All HS Graduates	6.4%	1.1%	N/A
b. Percent Greater Than Reference Group	12.4%	7.6%	N/A

V. SERVICES

The University Outreach Program provides the complete range of the standard set of possible services, with the exception of Dual Credit courses. These services include:

- Early information (about preparing for college), which begins in earnest in the 8th grade
- Family involvement in the activities of the program
- Academic counseling and advising
- Tutoring and mentoring activities
- Development of study and/or academic skills in particular areas
- High school-to-college transition activities
- Assistance with college admissions, financial aid, or eligibility/placement tests
- Participation in cultural, social, or co-curricular activities
- Financial aid

[74] Ibid.

Students are typically recruited to the program in the 7th grade, with actual participation beginning in the 8th. The program attempts to enroll 30 students per grade at each target school. As space permits, students may also be recruited to participate in the program in grades 8 through 11. New participants are not taken from senior classes. The program strives to engage each participant, in group sessions of approximately 30 students, once a month during the school year.

Each participant is provided a ***College Planning Guide***, specific to the grade level of the student, that provides the student a plan of work for the year.

Beginning in the 8th grade, students are presented with rudimentary information about college in a section in the guidebook entitled *College 101.* The guidebook then takes the student through topics about: career exploration, goal setting, school success, study skills, time management, social skills, self-esteem, leadership development, preparing their high school academic plan, and finally, how to spend a productive summer after school concludes for the year. University Outreach counselors meet with the students once a month at their school to go through the various topics in the guidebook.

The plan for the summer includes an opportunity to participate in a four-week summer academic enrichment program, called *University Jumpstart*, which is offered on several different college (or in some cases, high school) campuses. The program gives students a first-hand experience of a simulated college life. Program content of the day camp focuses on mathematics, science, and communication skills. Students are involved in classroom and laboratory activities, as well as field trips. The program climaxes with an overnight campus visit to the UT Austin campus where students participate in an "Academic Challenge" similar to a traditional college-bowl.

The 9th grade begins with a review of the objectives and standards of the University Outreach Program and of the monthly student meeting schedule. Topics addressed in the monthly meetings include: making the transition to high school and a college preparatory program; information about study skills and test taking, with handouts on *Test Taking Skills, Study Skills*, and how to *Evaluate Your Study Skills*; information about time management; career exploration (and associated exercises); college exploration to allow students to consider different characteristics when choosing a college; discussions about leadership skills; an introduction to financial planning for a college education; an introduction to college entrance exams; and, discussions about how to spend a productive summer.

The 10th grade begins with a review of the University Outreach goals and an exploration of the students' academic goals. Students are encouraged to set academic goals and to think through the steps that will be required to achieve their goals. Much of the year involves focusing on the same topics introduced in the 9th grade year. During the sophomore year, students are encouraged to gather

information about various college campuses and to specifically identify resources for making college campus visits. Students are encouraged to make such college visits.

In the 11th grade, the focus of the program narrows to the preparing for and the taking of PSAT, SAT and ACT tests, attending college fairs, and identifying the particular colleges to which the students will apply. The planning calendar includes the following:

September	*Discuss* college plans with parents and Outreach counselor *Register* for the Preliminary Scholastic Aptitude Test (PSAT)/National Merit Scholarship Qualifying Test (NMSQT) *Take* practice tests at the UOC *Enroll* in college preparatory classes
October	*Attend* college nights/fairs *Take* the PSAT/NMSQT *Confer* with Outreach and high school counselors on choice of colleges
November	*Explore* college choices and obtain catalogs, financial aid information, and other reference materials with assistance from UOC and high school counselors
December-January	*Search* for financial aid and scholarship opportunities, with assistance from the UOC
February-March	*Register* for May SAT exam(s) *Participate* in preparation classes for the SAT and ACT
April	*Register* for June SAT exam(s) *Inquire* about the Early [admission] Decision Plan offered by some colleges
May	*Prepare* summer reading list with assistance from the students' English teachers *Take* May SAT exam(s) *Enroll* in any recommended college preparatory classes not available in senior year, which are offered in summer
June-August	Jumpstart Longhorn Round-Up

Junior and Senior participants can experience college life through two different summer programs—Jumpstart and Longhorn Round-Up.

Jumpstart is a five-week summer academic enhancement program held on a college campus to give students first-hand experience of a simulated college life. The day-camp aspect focuses upon mathematics, science, and communication skills. College awareness topics and personal development skills are also addressed. The program culminates with an overnight campus visit.

Longhorn Round-Up involves an overnight camp at The University of Texas at Austin. Students learn how to navigate admissions procedures, prepare financial aid applications, as well as learn about deadlines, majors offered, and costs in addition to tuition and fees. Currently enrolled college students serve as camp counselors.

For those students who have not taken entrance exams, summer registration for fall exams is encouraged.

In the 12th grade, the fall is devoted to narrowing the list of colleges the student is interested in attending, obtaining financial aid information, applications and recommendations, and preparing application essays. If the student is applying for an early admissions decision, forms and tests scores must be submitted.

In January and February, regular college applications are submitted and financial aid information requests are due. In the spring, decisions about which college to attend (if multiple offers are tendered) must be made and preparations made for the entry to college.

Costs of Services

Estimated Costs of Services
For University Of Texas Managed University Outreach Centers[75]

SERVICE	2003	2004
Regular Program		
Total Expenses	$758,535	$764,076
Per Participant Expenses	$368	$435
Jumpstart		
Total Expenses	$31,162	$33,665
Per Participant Expenses	$528	$488
Longhorn Round-Up		
Total Expenses	$16,848	$16,203
Per Participant Expenses	$101	$110

Note: Per the University Outreach Center's Annual Report(s), there were 2,063 participants in the three centers managed by UT Austin in 2003 and 1,756 participants in 2004.

Survey of Former Participants

Former UOC participants were canvassed by mail in the fall of 2005 to gain some qualitative insight into the experiences of these students and their opinions regarding the relative value of the different services they received when in the program. These comments are not intended to represent statistically rigorous appraisals of the program, but merely to provide some additional perception of the workings of the program.

All of the two dozen students who responded to the survey had either enrolled in a college at one time, or were enrolled in 2005.

Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories, **offered by the program,** with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. On a scale of 1 to 10, with 10 indicating that the service was most helpful to the students, the collective judgment of the students is reflected below:

[75] Expense data provided by the University Outreach Center administrative office.

Participant Opinions Regarding the Helpfulness of Services Provided By the University Outreach Centers Program

Service	Score
Early Information	7.5
Academic Counseling/Advising	7.5
Activities to Develop Study or Special Academic Skills	6.9
Assistance with Admissions/ Financial Aid Applications	6.8
High School-to-College Transition Activities	6.7
Mentors/Tutors	6.1
Co-Curricular Activities	5.1
Family Involvement	5.0
Financial Aid	4.4

Note: A score of 6.7 or greater indicates that the collective opinion is that the service was *at least* 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments are excerpted from the surveys:

"This program gave me advice on what to expect from college and how to handle it. They helped me with my application and some counselors even read my essays. So I'm very thankful for all the help."

"University Outreach inspired me to prepare for college enrollment and the work involved. Constantly having an advisor coming in to talk to us every month was extremely helpful in familiarizing me with the college process and trusting that all would turn out well. Sometimes I was too busy with academic work and sports to attend workshops or field trips, but with the advisor visits during school, I was able to obtain valuable college information and guidance."

"I believe that the more information that we receive about scholarships the more helpful it would be. The less money parents have to spend the more encouraging it is for students."

"If I were able to receive more financial aid I would be returning to school this semester but since I can't I must work hard now and attend in the spring of 2006."

"I believe Jump Start or the program that allows you to take courses at a local college for like 6-8 weeks was really awesome."

"I had never really seen myself in college. Yet when I was introduced into the program my 8th grade year, I got a good sense of the college life. The program gave students the opportunity to attend several courses at the University to get that feel of being in college. At that time, little did I know that I would end up at the same college four years later."

"We took several trips and talked to undergraduate students. The students' information was really helpful in the sense that they would tell us about their experience in college and what to do to succeed. Getting information from financial aid officers, counselors and recruiters was also helpful."

VI. ADMINISTRATIVE RELATIONSHIPS

The UOC program has formal partnership plans with the target schools participating in the program. These include: provisions for use of the schools' facilities for in-school meetings with students; agreements providing for students' release from class to participate in the program activities; and, provisions to involve the UOC counselor in various school activities. As stated previously, the schools' teachers and counselors are involved in recommending participants to the program and in subsequent counseling as well.

VII. SELF-EVALUATIONS

UOC maintains service records on each participant and conducts surveys of seniors who are graduates of the program. The surveys are typically conducted in the summer following high school graduation. There are no formal means of follow-up in periods after this senior survey.

VIII. REPORTED "LESSONS LEARNED"

The program administrator indicated that she would like to be able to offer a one-half day, six week-ends a semester, *Saturday College Academy*, through which students and their families could receive various counseling and enrichment services.

IX. CONCLUSIONS

The University Outreach Centers program incorporates most of the key service elements considered by many to be the essential elements of a successful intervention program. The Centers have been able to play an important role in elevating the college-going rates of the graduates of their program. Early intervention and motivation of students, particularly through counseling visits, tips and exercises on how to improve academic skills, coupled with periodic trips to college campuses and assistance with college admissions and financial aid

applications appear to have had a significant impact on the college-going behavior of the programs' participants.

The data illustrated above confirms the observation that the University Outreach Program represents a valuable tool in the State's efforts to *Close the Gaps.*

THE UNIVERSITY OF NORTH TEXAS
TALENT SEARCH (TRIO) PROGRAM

I. ADMINISTERING INSTITUTION(S); COLLABORATORS

The UNT Talent Search (TRIO) Program is administered by the University of North Texas in Denton, Texas. North Texas area public schools that collaborate with the UNT Talent Search program include the following:

Target School Name	City	State
Bridgeport High School	Bridgeport	TX
Calhoun Middle School	Denton	TX
Chico High School	Chico	TX
Clear Creek Intermediate School	Sanger	TX
Decatur High School	Decatur	TX
Denton High School	Denton	TX
Gainesville High School	Gainesville	TX
Gainesville Junior High	Gainesville	TX
Krum High School	Krum	TX
Lake Dallas High School	Lake Dallas	TX
Paradise High School	Paradise	TX
Ryan High School	Denton	TX
Sanger High School	Sanger	TX
Sanger Middle School	Sanger	TX
Strickland Middle School	Denton	TX

The following intermediate and middle schools feed into the referenced high schools:

Calhoun Middle School → Denton and Ryan High Schools
Clear Creek Intermediate School → Sanger Middle School → Sanger High School
Gainesville Junior High School → Gainesville High School
Strickland Middle School → Denton and Ryan High Schools

II. BACKGROUND INFORMATION

The National Program

The Federal TRIO Programs are educational opportunity outreach programs designed to motivate and support students from disadvantaged backgrounds. TRIO includes six outreach and support programs targeted to serve and assist low-income, first-generation college students, and students with disabilities to progress through the academic pipeline from middle school to post baccalaureate programs.[76] Talent Search, which began in 1967, is one of the oldest of the TRIO programs.

[76] "Federal TRIO Programs – Home Page". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 7 November 2005. http://www.ed.gov/about/offices/list/ope/trio/index.html.

The Talent Search program identifies and assists individuals from disadvantaged backgrounds who have the potential to succeed in higher education. The program provides academic, career, and financial counseling to its participants and encourages them to graduate from high school and continue on to the postsecondary school of their choice. Talent Search also serves high school dropouts by encouraging them to reenter the educational system and complete their education. The goal of Talent Search is to increase the number of youth from disadvantaged backgrounds who complete high school and enroll in the postsecondary education institution of their choice.[77]

Talent Search, Summary of National Statistics: 1967–2004

Year	Funding in Millions (Current Dollars)	Funding in Millions (in 2004 Dollars)	Number of Talent Search Projects	Average Grant Amount (Current Dollars)	Average Grant Amount (in 2004 Dollars)	Total Number of Students Served	Average Number of Students Served Per Project
1967	$2.0	$11.3	45	$44,444	$251,464	50,000	1,111
1980	15.3	35.1	167	91,617	210,036	198,817	1,191
1990	26.2	37.9	207	126,570	182,967	199,420	963
2000[78]	100.5	110.2	360	279,291	306,365	320,854	891
2004[79]	144.2	144.2	469	307,527	307,527	382,541	816

The average cost per participant in 2004 was $377. Dollar amounts expressed in 2004 dollars calculated using US Bureau of Labor Statistics Consumer Price Index.

A comparison of the Talent Search program with the Upward Bound program, another TRIO program, reveals that Talent Search has historically been a low intensity program. As a reference, Upward Bound spending per student averaged $4,721 in 2004.[80]

[77] "Purpose". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 7 November 2005. http://www.ed.gov/programs/triotalent/index.html.
[78] "Implementation of the Talent Search Program, Past and Present". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 28 January 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch/chapter2.doc.
[79] "Talent Search Program – Funding Status FY 2004". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 28 January 2006. http://www.ed.gov/programs/triotalent/funding.html.
[80] "Upward Bound program – Funding Status." ED.gov. U.S. Department of Education. 28 January 2006. http://www.ed.gov/programs/trioupbound/funding.html.

Talent Search Programs in Texas

The Talent Search Program has a substantial presence in the State of Texas. In 2004, there were 28 Talent Search Programs funded in Texas, at a total cost of $8.2 million. These programs served 21,113 participants, at an average cost of $389 in federal grant funds. The average grant for the Texas programs was $293,485. In 2000, there were only 17 such programs, serving 14,783 participants. [81]

UNT Talent Search Program

The UNT Talent Search program began in September of 1985. Its goal is to encourage students in grades 6 through 12 and those who have never completed high school to graduate from a secondary program and enter a postsecondary program of study.[82] The program, as required by federal law, targets low income and first generation students. Two-thirds of the student population must be potential first generation college students and the students' parents' taxable income must fall within 150 percent of the Health and Human Services (HHS) poverty guidelines. The remaining one-third of the student population does not have to meet either criterion although most of the remaining students are first generation or low income. Last year, only 2 percent of the 977 participants were "neither". The Talent Search program administrators are required to document that each participant has a need for academic support in order to successfully pursue a post-secondary education. Ethnicity is not a factor in student selection. The targeted schools range from 11 percent low income to 55 percent low income. The targeted schools were initially rural schools but as the program has expanded, more urban schools have been incorporated.

Students are able to enroll in the program beginning in the 6th grade. These middle school students are introduced to the program via school assemblies of 6th through 8th graders. There are no prerequisites placed on the students in terms of grades or curriculum. Students initially self-select themselves for the program based on their interest. The Talent Search advisors then screen students to make sure they qualify. Once a student is enrolled in the program, they remain enrolled with the same eligibility status all the years they are in the program. The students are not recertified in subsequent years of participation. Students that are typically recruited to the program are those that fall in the mid-range of students academically. Students who are low-achieving, academically, are many times too difficult to serve with the resources that Talent Search staff has available. Recruitment to the program continues in the early high school years with the primary focus resting on freshman students.

In the 2002-2003 academic year, this program served **956** students – **199** Middle School students (6th - 8th grade); **548** High School students (9th – 11th grade); **195** High School Students (12th grade only); and **14** Secondary School dropouts.

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[81] "Talent Search Programs – Awards – FY2004". ED.gov. U.S. Department of Education, Office of Postsecondary Education .28 January 2006. http://www.ed.gov/programs/triotalent/tsgrantees2004.xls.
[82] "Talent Search Mission: Graduate from High School and Go to College!". The University of North Texas. 30 January 2006. http://www.coe.unt.edu/ts/mission.htm.

Of the **956** students served, **691** (72 percent) were low-income and potential first-generation college students; **34** (4 percent) were low-income students (only); **209** (22 percent) were potential first-generation college students (only); and **22** (2 percent) fell into the "Other" category.

Selected Student Characteristics of the UNT Talent Search Program Target School Districts, 2004[83]

School District	% African-American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficiency
Bridgeport	0.5%	27.2%	71.6%	37.2%	8.4%
Chico	0.6%	7.3%	91.8%	37.3%	3.8%
Decatur	1.7%	25.5%	71.2%	33.0%	11.4%
Denton	11.5%	27.4%	58.5%	36.6%	14.9%
Gainesville	9.6%	31.9%	57.3%	54.3%	14.3%
Krum	0.7%	13.5%	82.5%	27.4%	3.9%
Lake Dallas	5.9%	12.2%	78.6%	18.0%	4.2%
Paradise	0.8%	7.3%	90.7%	27.3%	1.9%
Sanger	2.2%	14.8%	81.8%	28.0%	3.5%

Statewide, in 2004, 43.8 percent of students in all grades were Hispanic, 38.7 percent were White, 14.3 percent were African-American, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE AND OTHER SELECTED PERFORMANCE MEASURES OF STUDENTS IN HIGH SCHOOLS TARGETED BY THE UNT TALENT SEARCH PROGRAM

The following table illustrates the college-going rates of all graduates of high schools participating in the UNT Talent Search Program.

[83] "2003-04Academic Excellence Indicator System District Reports". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in the Fall Following High School Graduation[84]

High School	2003	2004
Bridgeport	48.5%	44.4%
Chico	65.8%	60.7%
Decatur	51.0%	52.6%
Denton	61.8%	59.9%
Gainesville	52.7%	45.0%
Krum	45.1%	49.3%
Lake Dallas	52.3%	55.6%
Paradise	48.4%	59.3%
Ryan	48.4%	45.2%
Sanger	48.9%	47.2%
State Average	48.5%	48.6%

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

Selected Performance Measures for All UNT Talent Search Targeted High Schools, 2004[85]

School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% Grads Found in Higher Education*
Bridgeport	91.1%	47.2%	44.8%	15.1%	44.4%
Chico	82.1%	89.6%	23.3%	11.2%	60.7%
Decatur	71.7%	53.2%	26.2%	28.8%	52.6%
Denton	74.2%	68.8%	33.5%	23.8%	59.9%
Gainesville	75.6%	54.2%	21.4%	24.6%	45.0%
Krum	77.5%	67.8%	32.5%	20.7%	49.3%
Lake Dallas	78.3%	68.9%	30.6%	21.9%	55.6%
Paradise	57.6%	61.5%	12.5%	13.1%	59.3%
Ryan	73.5%	61.4%	31.2%	20.0%	45.2%
Sanger	50.7%	56.6%	28.8%	11.9%	47.2%
Statewide	68.4%	61.9%	27.0%	19.9%	48.6%

Note: *The 'Found in Higher Education' data are from the preceding table.

[84] "High School to College Linkages". Texas Higher Education Coordinating Board. 27 January 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm. and
Texas Higher Education Coordinating Board. Texas High School Graduates from FY 2002-2005 Enrolled in Texas Higher Education Fall 2002-2005. 9 June 2006.
High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

[85] "2004-05 Academic Excellence Indicator System Campus Reports". Texas Education Agency. 26 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/campus.srch.html.

IV. OBSERVATIONS FROM THE DATA

As illustrated in the Demographics Table, Appendix C, 27 percent of the Talent Search high school graduates in 2003 were categorized as "economically disadvantaged", a term used by the Texas Education Agency that is descriptive of students who are eligible for free or reduced-price lunch or eligible for other public assistance. In 2004, not quite 35 percent of the graduates of the UNT Talent Search program were categorized as "economically disadvantaged" under this definition.

Students typically must apply for the free or reduced-price National School Lunch Program to be designated as "economically disadvantaged". In 2004, almost 53 percent of all students in Texas public schools were classified as "economically disadvantaged". *UNT Talent Search program personnel have noted the differences between the program's data that characterize students based on a determination of "low income" status and the criteria used by the Texas Education Agency to ascertain status as "economically disadvantaged"*. To be compliant with the program guidelines of the U.S. Department of Education, at least two-thirds (66 percent) of Talent Search student participants must be categorized as "low income".

There are several possible explanations for the observation that fewer than 66 percent of the program's participant graduates are characterized, through TEA records, as "Economically Disadvantaged".

- There are differences in the definitions and in the standards for determining the status of the students.

  For the purposes of the Talent Search programs, "low-income" status is based on a determination by the program administrators, as follows:

  LOW-INCOME INDIVIDUAL. – The term "low-income individual" means an individual from a family whose taxable income for the preceding year did not exceed 150 percent of an amount equal to the poverty level determined by using criteria of poverty established by the Bureau of the Census.[86] The income level for eligibility varies by the number of persons in the household.

  For the purposes of determining status as ECONOMICALLY DISADVANTAGED, students are either categorically eligible for the National School Lunch Program due to their eligibility for various public assistance programs or they are eligible by virtue of their gross family income for the month prior to their application to the lunch program. There are numerous qualifications affecting countable income for eligibility purposes.

[86] "Laws, Regulations, and Guidance". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 17 November 2005. http://www.ed.gov/about/offices/list/ope/trio/triohea.pdf

Eligibility is determined by personnel of the school districts. Generally, students and their families must apply to the lunch program before a determination is made about their status as "economically disadvantaged". To be eligible for Free Lunch, the adjusted family income may not exceed 130 percent of the poverty level; for a reduced-price lunch, the level is between 130 percent and185 percent of the poverty level. The lunch program is administered by the Texas Department of Agriculture and the local school districts.

Therefore, there are differences in eligibility determination criteria and in the way students may or may not be identified as "low-income" or "economically disadvantaged". The economic status of the program's graduates also does not necessarily reflect the economic status of the entirety of the program's participants.

- Another explanation advanced by the program administrators for the smaller percentage of "economically disadvantaged" high school students may be a reluctance of these students to enroll in the free/reduced lunch program. Also, high school students, especially juniors and seniors, may be involved in work release programs, dual-credit programs, or "senior early-release" programs (due to completion of required curriculum by the senior year) and may not be on campus during the lunch hour.

One concern about the data available through the THECB/TEA database that is used for this study is that it may inadequately reflect the characteristics of Talent Search participants. The data do not reflect the educational attainment status of the parents of the participants. Many of the students served by Talent Search are potential first-generation college students. Such students are particularly challenged when it comes to their prospects for participation and success in college. This very important variable is not captured in the state database and is, therefore, unavailable for analyses of comparable outcomes.

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The UNT Talent Search Program provides an almost complete array of participant services with the exception of Cultural, Social, or Co-Curricular Activities or Events; Financial Aid to Attend College and Dual Credit/Dual Enrollment courses. Those services are:

- Early Information About College
- Family Involvement in the Program's Activities
- Academic Counseling/Advising

- Mentors or Tutors Provided by the Program
- Development of Study/Academic Skills
- High School to College Transition Activities
- Assistance with College Admission Applications and/or Financial Aid Applications or Eligibility/Placement Tests

All Talent Search programs nationwide share the same responsibility to provide some, if not all, of the services listed below. Sec. 402B of the Higher Education Act of 1965 states

…Any talent search project…may provide services such as –

(1) Academic advice and assistance in secondary school and college course selection;
(2) Assistance in completing college admission and financial aid application;
(3) Assistance in preparing for college entrance examinations;
(4) Guidance on and assistance in secondary school reentry, entry to general educational development (GED) programs, other alternative education programs for secondary school dropouts, or postsecondary education;
(5) Personal and career counseling, or activities designed to acquaint individuals from disadvantaged backgrounds with careers in which the individuals are particularly underrepresented;
(6) Tutorial services;
(7) Exposure to college campuses as well as cultural events, academic programs and other sites or activities not usually available to disadvantaged youth;
(8) Workshops and counseling for families of students served;
(9) Mentoring programs involving elementary or secondary school teachers or counselors, faculty members at institutions of higher education, students, or any combination of such persons; and
(10) Programs and activities described in paragraphs (1) through (9) which are specially designed for students of limited English proficiency.[87]

The U.S. Department of Education's study of Talent Search programs revealed that Talent Search participants often had college aspirations before joining the program. Because of this, Talent Search programs were designed to give the participants the confidence that they could go to college and provide them the preparation tools to succeed once enrolled.[88]

For students in grades 9-12, UNT Talent Search focuses on five primary services spread throughout the four years of high school. These include secondary school academic success, career exploration, financial aid support, personal development, and

[87] "Laws, Regulations, and Guidance", ED.gov. U.S. Department of Education, Office of Postsecondary Education. 17 November 2005. http://www.ed.gov/about/offices/list/ope/trio/triohea.pdf.
[88] "Implementation of the Talent Search Program, Past and Present." ED.gov. U.S. Department of Education. 25 January 2006. www.ed.gov/rschstat/eval/highered/talentsearch/index.html

postsecondary enrollment. The following chart illustrates those services defined by grade level.

UNT Talent Search Program Curriculum by Grade Level

	9th	10th	11th	12th
Secondary School Academic Success	• Study Skills • 4-yr Academic Plan	• Study Skills • Evaluate Transcript • Intro to ACT	• Study Skills • Evaluate Transcript	• Evaluate Transcript • Calculate GPA • Tutor Younger TS Participants
Career Exploration	• Occupation Exploration	• Myers-Briggs Test	• Career Counseling	• Career Decision Making
Financial Aid Support	• Exploring College Costs	• Money Management Techniques	• College Board Scholarship Search • Parent/Student Financial Aid Night	• FAFSA • Parent/Student Financial Aid Night • Federal Student Aid on the Web
Personal Development	• Goal Setting • Academic/Wellness Balance Counseling	• Life Span Discussion	• Self-Confidence Discussions	• Decision Making Discussions • Goal Setting
Postsecondary Education	• College Campus Field Trips	• Intro to PSAT • College Comparison Discussions • College Campus Field Trips	• PSAT Registration in Fall • ACT and SAT Registration in Spring • Essay Writing Practice • College Campus Field Trips	• Complete College Applications • Take or Retake Placement Tests • Prepare Sample College Schedules

Talent Search offers a special summer component for 8th graders that encompasses a week's worth of activities including self-esteem enhancement, high school visits, volunteer opportunities, cultural enrichment, exploration of student portfolios for their high school years, diversity experiences and college visits. Tutoring activities and academic enhancement are not offered.

During their Senior Summer Seminar, prospective senior students visit several college campuses over a two-day period. This trip is limited to 30 seniors. Additionally, the various Talent Search advisors make arrangements throughout the school year for their high school students to visit various college campuses on day excursions.

In the spring, Talent Search staff holds an annual Parent Open House. Family involvement is sought throughout a student's time in the program but there is not as much participation as the advisors would like to see. Newsletters are sent periodically to parents in addition to the parent conference. The program advisors think that perhaps UNT is intimidating to parents and this may be a reason for a lack of attendance at events.

The demand for the services of this program far exceeds the resources available. There are six advisors including the Director of the program. Each advisor has 178 students that they counsel and there is only one middle school advisor.

Follow-up with former students of the program is limited to the semester after high school graduation. An enrollment verification letter is sent to college campuses to

ascertain student enrollment. The program has determined that 60-70 percent of their students matriculate to higher education in the year following high school graduation. Administrators are pleased with this outcome given that, from their investigation, only 17 percent of first generation students go to college.

The program secures fee waivers for students taking the SAT and ACT tests. Most of the colleges accepting applications from Talent Search students offer an application fee waiver.

Survey of Former Participants

Student responses to the questionnaire/survey disseminated during both the student focus group and by mail during the fall of 2005 indicate the following services as being the most valuable to the students' decision to seek college enrollment. Twenty-eight (28) former Talent Search students participated in the survey. Fourteen of these students were interviewed in a focus-group setting.

Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories, offered by the program, with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. These opinions have been summarized on the basis of a scale of 1 to 10 with 10 indicating that the service was most helpful to the students. The collective judgment of the students is reflected below.

Participant Opinions Regarding the Helpfulness of Services Provided by the UNT Talent Search Program

Service	Score
Assistance with College Admissions/Financial Aid Applications, or Eligibility/Placement Tests	9.2
High School to College Transition Activities	8.0
Early Information about College	7.9
Academic Counseling/Advising	7.9
Development of Study/Academic Skills	7.4
Mentors/Tutors Provided by the Program	6.1
Family Involvement	5.0

Note: A score of 6.7 or greater indicates that the collective opinion is that the service was at least 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments were excerpted from the surveys:

"My advisor was always there keeping me on my toes, answering my questions, and always encouraging me in ALL my goals and aspirations."

"It was proven that paying for college was actually in my reach, and right now, it really is. They gave me scholarship opportunities and sat me down to make sure I tried them."

"Talent Search was very helpful in preparing for college and during the transition between the high school and university settings. Every week when I met with my Talent Search advisor, she and I would go over the tasks I had set for the previous week and then plan the goals for the following week. With her help I was finally able to organize and prioritize the things which needed to be accomplished."

"The help I received to obtain financial aid solidified my decision to go to college. Paying for college was the only obstacle I foresaw in gaining my college degree. Talent Search helped in every step from filling out the FAFSA to finding scholarships to apply for."

"My mom raised me by herself and she never had the chance to attend college. I had fallen on hard times in high school and Talent Search was there to help me up again. Not only was my mentor upbeat but she truly cared about all of us. Visiting the different schools helped orient me with their strengths and weaknesses. Our group activities also helped me "come out of my shell" which is vital for participation credit in college."

"They showed me what college life was like through a visit to a college campus. The staff was very encouraging and supportive; they even brought in former students to help explain how to prepare for college. Got me to take the SATs twice which I otherwise wouldn't have done."

"The program made college seem like something very attainable financially as well as academically. If I had not found out about scholarships, grants, etc., I would have thought it was a very difficult process. Same with attending/applying to schools; the program helped me in every way. The trips and activities helped the most. They helped me decide on a school/major best suited to me."

Costs of Services

Estimated Costs of Services Provided By the University of North Texas Talent Search Program

SERVICE	2003	2004	2005
Regular Program			
Total Expenses	$390,611	$398,423	$398,423
Per Participant Expenses	$409	$414	$408
Summer Enrichment Program			
Total Expenses	$3,954	$3,342	$3,955
Per Participant Expenses	$141	$98	$198
Campus (College) Visits			
Total Expenses	$0	$2,431	$2,796
Per Participant Expenses	$0	$69	$65
Regular Program - # of Participants	956	963	977
Summer Enrichment Program - # of Participants	28	34	20
Campus (College) Visits - # of Participants	0	35	43

VI. ADMINISTRATIVE RELATIONSHIPS

Talent Search personnel reported to the survey that the program had administrative arrangements in place to allow for the use of public school facilities for meetings with participating students, release agreements which allow students to participate in Talent Search activities away from campus during the school day, and provisions to include Talent Search staff in activities/meetings at the school site. Not all schools provide all of the above arrangements. The one arrangement that the advisors felt most important was the designation of a familiar site within the school facility where students could meet consistently with their advisor in an academic setting. This is not in place in some schools. It was also suggested that the impact of the program would be greater if there were a systemic priority placed on such intervention programs by the P-12 system. Participation with higher education entities is very much dependent on 'personal relationships' rather than a programmatic imperative.

VII. SELF EVALUATIONS

The UNT Talent Search program is required, as are all other Talent Search programs nationwide, to submit to the U.S. Department of Education an annual performance report by November 30 of each year. In the report filed by UNT Talent Search for the 2002-2003 academic year, the program met or exceeded 6 of 6 objectives that had been determined for the program year. Those objectives and outcomes are illustrated below.

UNT Talent Search Summary of Project Accomplishments, 2002-2003

Measure	Objective	Performance
Number of Participants Served	950	Exceeded Objective
Annual Needs Assessment	98% Completed	Exceeded Objective
Retention of Participants	85%	Exceeded Objective
Attain High School Diploma or GED	85% of Seniors and 25% of GED candidates	Exceeded Objective for Seniors; Did Not Meet Objective for GED
Enrollment in Postsecondary Institution	60% of "College Ready" Students	Exceeded Objective

VIII. OTHER EVALUATIONS

In January of 2004, the U.S. Department of Education released the first phase of an ongoing national evaluation of the Talent Search program. The work represents the first national study of the program undertaken since the early 1970s. This report, entitled "Implementation of the Talent Search Program, Past and Present, Final Report from

Phase I of the National Evaluation"[89], was prepared for the DOE by Mathematica Policy Research, Inc.

Although the report is fairly comprehensive, the findings reported in this paper were chosen for their relevance to the state's P-16 Study and, in particular, this Talent Search program.

The National Evaluation

> The Department of Education study indicates that Talent Search serves a relatively small percentage of students nationwide who, based on their family income, may be eligible for the program. Overall, the number of Talent Search participants is equal to about 21 percent of the number of students eligible for free lunch (not over 130 percent of poverty) in target schools and about 6 percent of that population in all schools serving grade 7 or higher.
>
> The front line staff members, such as counselors and advisors, reportedly spend most of their time – often four days a week - in the field visiting target schools. The project survey indicated that staff spend, on average, about 46 percent of their time in direct service, including counseling; 24 percent on record keeping, reporting and administration; and 14 percent on participant recruitment.
>
> Compared with a decade earlier, more [Talent Search] projects appear to be providing academic support services such as tutoring, and to a higher percentage of participants.
>
> Apparently, many services are not offered very frequently, do not last very long, and are optional for participants. On average, 38 percent of middle school students and 48 percent of high school students reportedly spent less than 10 hours in program activities during the 1998-1999 program year.
>
> Limited resources have sometimes prevented projects from serving as many students as they would have liked or from serving all participants who requested a given service. For example, nearly half of all projects were unable to provide tutoring to all students who requested it.
>
> Although anecdotes, especially those offered by current or past participants, are not hard evidence of program effectiveness, it is useful to know how students and alumni perceived that the program helped them. Reported benefits included more knowledge about college and financial

[89] "Implementation of the Talent Search Program, Past and Present, Final Report from Phase I of the National Evaluation". ED.gov. U.S. Department of Education, Office of Postsecondary Education. 25 January 2006. http://www.ed.gov/rschstat/eval/highered/talentsearch/index.html.

aid, better access to and more choice of colleges, improved academic performance, and increased confidence and motivation.

Despite recent modest increases in average funding per participant, Talent Search generally remains a low intensity program. For the most part, participation in program services is optional; basic services might be offered biweekly or even just once a month; and many students spend less than 10 hours in program activities over the course of a year. Overall, the program still adheres to the original assumption that small amounts of service, delivered at crucial times, can make a difference in students' decisions concerning college preparation and enrollment.

Annual performance reports strongly suggest that many students stay in Talent Search a relatively short time – and not just those who join toward the end of high school.

Not surprisingly, the issue of resource constraints came up often in both the survey and case studies. Project staff could not do all they wanted to for all their participants.[90]

In all, two hundred sixty directors of Talent Search programs provided their opinions of program activities that they thought contributed most to the achievement of the programs' objectives. Most frequently mentioned by these professionals were *Financial Aid Services*, followed closely by *Campus Visits.* Other services that were noted were *Tutoring, Assistance with Postsecondary Applications, Career Counseling, Academic Advising,* and *College Orientation Activities.*

These administrators were also asked about the priorities they place on the various services the programs offer and how they would prioritize these services if the program had any additional resources. The target group deemed the greatest priority, both at present and in the case of additional resources, was the senior high students. In the case of services for their participants, the greatest priority was placed on 'workshops' and 'campus visits'. In terms of the 'likelihood of increasing emphasis on a particular service if the project had more resources', administrators indicated that the first priority would be to increase time available for Talent Search counselors to meet one-on-one with participants. The next greatest priority would be to enhance campus visits.

The U.S. Department of Education recently (June 2006) completed its national evaluation of Talent Search programs and concluded that participants in Talent Search programs were indeed more likely than non participants from similar backgrounds to be first-time applicants for financial aid and were more likely to have enrolled in a 2-year or 4-year institution of higher education than non participants. Talent Search programs are comprehensive outreach programs

[90] Ibid.

that include a focus on services such as college orientation and assistance with financial aid and college admissions applications, as well as others. The national report states: "Practical information – direct guidance on how to complete applications for financial aid and admission to college and what a college campus looks and feels like – may have been one of the key services that Talent Search projects delivered".[91]

IX. CONCLUSIONS

The UNT Talent Search program incorporates most of the key service elements considered by many to be the essential elements of a successful intervention program. Because of the early student intervention (middle school) aspect of the program, students are provided with information about college at a crucial stage in their public school career. This early intervention allows for course-taking planning that could put the student on a more rigorous curriculum path in preparation for post secondary work. The program administrator has stressed the importance of and the results seen in the mentoring of these students by the program advisors. It is felt that these positive role models have a significant impact in influencing students to succeed in their college-going endeavors.

The UNT Talent Search program is one of a family of similar programs operating in Texas that appear to result in a positive outcome for its participants, particularly with respect to enrollment in college in the first fall following high school graduation. For the UNT Talent Search program participants who were a part of the graduating Class of 2003, 62.4 percent of the students were found to have enrolled in college in the fall following high school graduation and 73.9 percent of those students persisted to a second year of college.

If the state database contained information about the educational attainment status of the students' parents, more conclusive comparisons could be made about the enrollment outcomes of the Talent Search program.

[91] "A Study of the Effect of the Talent Search Program on Secondary and Postsecondary Outcomes in Florida, Indiana and Texas: Final Report from Phase II of the National Evaluation". U.S. Department of Education. Office of Planning, Evaluation and Policy Development. Policy and Program Studies Service. Washington, D.C., 2006.

THE UNIVERSITY OF TEXAS AT DALLAS
SAT PREP PROGRAM

I. ADMINISTERING INSTITUTION(S); COLLABOATORS

The SAT Prep Program is administered by the University of Texas at Dallas. High schools in the Dallas Independent School District participating in this program are James Madison High School and Lincoln High School.

II. BACKGROUND INFORMATION

The UT Dallas Sat Prep Program began in June of 2001 as an affiliated program within the School of General Studies under the leadership of Dr. George Fair. It is an investigation into the provision of SAT preparation and pre-college activities as a method to increase the number of under-represented students attending universities. The target group for this program includes students from high schools with low college-going rates with a high proportion of economically disadvantaged students. The two targeted high schools in Dallas ISD are Lincoln and Madison High Schools. These high schools have a high percentage of minority students (99 percent) with African-American students comprising the primary population (90 percent).

The SAT Prep Program can commence as early as a student's freshman year and classes are conducted during the school year and in summer sessions. Students self-select themselves for the program and are then screened by high school counselors. To participate in the program, students must be participating in or have completed Algebra I. In 2004, there were 70 high school students and 4 middle school students who participated in the program.

TEA has approved a ½ credit course for students who take the SAT Prep program during their junior year in high school.

Selected Student Characteristics of SAT Prep Target Schools, 2004[92]

High School	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficiency	% Mobility (2002-2003)
Lincoln	95.7%	4.1%	0.1%	78.5%	1.4%	24.0%
Madison	88.9%	9.6%	1.3%	55.6%	5.5%	37.0%

[92] "2003-2004 Academic Excellence Indicator System Campus Reports". Texas Education Agency. 25 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/campus.srch.html.

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African-American, 38.7 percent were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE OF ALL GRADUATES OF THE TWO SAT PREP TARGET HIGH SCHOOLS

The average college going rates for **all students** at Lincoln and Madison High Schools is well below the average state college-going rate of 48-49%. Improvements to those rates, however, have been noted in recent years as illustrated in the chart below. It is important to keep in mind that these two schools are in inner city Dallas in a neighborhood with a high level of minority and economically disadvantaged students.

Percent of All Graduates Found in Texas Public and Private Institutions of Higher Education in the Fall Following Graduation[93]

High School	2002	2003	2004
Lincoln	37%	32%	42%
Madison	22%	28%	35%
State Average	48.5%	48.5%	48.6%

The median high school-to-college rate for graduates of Texas public high schools for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[93] "High School to College Linkages". Texas Higher Education Coordinating Board. 25 January 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.
High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represented only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures of All High School Graduates from the SAT Prep Target High Schools[94]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees at or Above SAT/ACT Criterion	% of Grads Found in Higher Education
Lincoln HS				
2002	65.5%	90.9%	.05%	37%
2003	72.8%	91.1%	.05%	32%
2004	73.2%	-------	4.2%	42%
Madison HS				
2002	80.4%	48.3%	0.0%	22%
2003	79.3%	59.5%	0.0%	28%
2004	73.1%	70.0%	0.0%	35%
State Average, 2004	68.4%	61.9%	27.0%	48.6%

IV. OBSERVATIONS FROM THE DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The SAT Prep program administrator reported to the survey that the program provides the following services to its students:

- Early Information About College
- Mentors or Tutors Provided by the Program
- Development of Study Skills or Special Academic Skills
- High School to College Transition Activities
- Assistance with College Admissions or Financial Aid Applications, or Eligibility/Placement Test Preparations. (The program has secured funds for covering the cost of the SAT tests for its students. The program allocates $41.50 to cover the cost for each student to take the official SAT and this cost is reflected in the budget each year.)

The SAT Prep activities take place during the school year and during summer sessions. There are two sessions at each school. Each summer training session is 2 weeks in duration with students spending 15 hours each week in study sessions. The first week focuses on the math portion of the SAT test and the second week focuses on the verbal

[94] "2004-2005 Academic Excellence Indicator System". Texas Education Agency. 25 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/index.html.

portion. The sessions culminate in a weekend session (two days, one night) for college prep activities on the UTD campus. Students can enroll as early as their freshman year, although most students are juniors and seniors. Volunteer students from the university assist in the delivery of information to the participating students and serve as mentors to the group as well.

The program has also enlisted the assistance of counselors at each of the high schools to oversee the delivery of information about the program and to screen and select students for the program. The counselors look for good students who are academically committed and willing to invest the time it takes to attend the training sessions. Parental involvement is encouraged as the students must secure parental permission to participate. The students are required to sign a contract.

Costs of Services

Estimated Costs of Services Provided by the UT Dallas SAT Prep Program

Service	2003	2004
SAT Prep Classes		
Total Expenses	$26,000	$26,000
Per Participant Expenses	$388	$351
Student Stipends		
Total Expenses	$13,400	$14,800
Per Participant Expenses	$200	$200
Weekend Prep Activities (culmination of 2 week sessions)		
Total Expenses	$13,985	$6,000
Per Participant Expenses	$245	$300
SAT Prep Classes - # of Participants	67	74
Student Stipends - # of Participants	67	74
Weekend Prep Activities - # of Participants	57	20

VI. ADMINISTRATIVE RELATIONSHIPS

The Sat Prep program reported to the survey that the following relationships were in place with the targeted DISD schools: partnership plans, the provision for the use of the schools' facilities, and the inclusion of program representatives in school activities. Each partnering school has a designated administrator for the SAT Prep program. This administrator serves as a liaison for the high school students and the UTD staff. UTD staff work closely with the partnering schools to insure that the programs are successful. They utilize both informal and verbal agreements.

VII. SELF EVALUATIONS

After each program session, the SAT Prep staff conducts informal evaluations of the student workers to set goals for the next year.

VIII. NOTES OF INTEREST/CONCERN

The SAT Prep program has been financed through grants and foundation support. Funding is sporadic and insufficient to pay stipends for participating students (administrators contend that based on experience, a $200 per participant stipend that was paid in the past resulted in greater and more focused participation) or to expand the program.

IX. CONCLUSIONS

The SAT Prep program combines four of the key service elements identified by the Study as critical to student matriculation to college. Intense preparation for the taking of the SAT exam is the primary component of the program's curriculum. Coupled with that is the interaction the high school students have with the program mentors who are successful college students, many of whom are from the same ethnic/social background as the high school students. These mentors focus on the preparation aspect but equally work to instill a college-going mentality in these high school students through example.

For the SAT Prep high school graduating class of 2003, 68.4 percent of the participating students were found in college in the first year following high school graduation. Of those students, 76.9 percent persisted to a second year of college.

THE UNIVERSITY OF TEXAS - PAN AMERICAN CONCURRENT ENROLLMENT (CE) PROGRAM

I. ADMINISTERING INSTITUTION(S); COLLABORATORS

The Concurrent Enrollment Program is administered by the University of Texas – Pan American in Edinburg. Collaborating school districts within the five county service territory include the following:

County	School District
Cameron	Brownsville ISD, Harlingen CISD, South Texas ISD, San Benito ISD, Santa Rosa ISD
Hidalgo	Edinburg CISD, Mission CISD, Weslaco ISD, Donna ISD, La Joya ISD, Edcouch-Elsa ISD, Hidalgo ISD, La Villa ISD, McAllen ISD, Mercedes ISD, Pharr-San Juan-Alamo ISD, Sharyland ISD, Valley View ISD
Jim Hogg	Jim Hogg County ISD
Starr	Rio Grande City CISD, San Isidro ISD, Roma ISD
Willacy	Lyford CISD, Raymondville ISD, San Perlita ISD

UT Pan American invites high school juniors and seniors who attend high school in the surrounding Valley school districts to apply for admission to the Concurrent Enrollment program. Through this special program, students "will have the opportunity to enroll in University courses, benefit from the expertise of highly qualified University professors, take advantage of outstanding academic facilities, and earn college credit while still in high school"[95].

The term 'concurrent enrollment' is used synonymously with the term 'dual credit' by institutions of higher education and their collaborating school districts. The Texas Higher Education Coordinating Board Rules and Regulations define dual credit as…

> 12) Dual credit--A process by which a high school student enrolls in a college course and receives simultaneous academic credit for the course from both the college and the high school. While dual credit courses are often taught on the secondary school campus to high school students only, §4.84 of this title (relating to Institutional Agreements) and §4.85 of this title (relating to Dual Credit Requirements), also apply when a high school student takes a course on the college campus and receives both high school and college credit. Dual credit is also referred to as concurrent course credit; the terms are equivalent. However, dual (or concurrent)

[95] "Concurrent Enrollment – The Total University Experience". Division of Enrollment and Student Services. The University of Texas Pan-American. 10 February 2006. http://hs2us.panam.edu/ce/tue.html.

enrollment refers to a circumstance in which a student is enrolled in more than one educational institution (including a high school and a college).[96]

II. BACKGROUND INFORMATION

Concurrent Enrollment/Dual Credit Programs Nationally

The National Center for Education Statistics has recently published two works providing an insight to the magnitude and certain characteristics of dual credit/dual enrollment programs nationally. One, *Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002-2003*[97] examines these programs from the perspective of the high schools engaged in such activities. The other, *Dual Enrollment of High School Students at Postsecondary Institutions: 2002-2004*[98] approaches the programs from the perspective of the institutions of higher education. Both focus on these activities in the 2002-2003 academic year.

The papers note that there is no national source of information on dual enrollment or baseline data on dual credit and exam-based courses for high school students.

The *Dual Credit* study, published in April of 2005, is the first national survey to provide baseline data on dual credit and exam-based courses, including Advanced Placement (AP) and International Baccalaureate (IB) courses, for public high school students. It found that 71 percent of the nation's public high schools offered courses for dual credit. Public high schools reported an estimated 1.2 million enrollments in courses for dual credit in the twelve month 2002-2003 school year (this total may include duplicated counts of students who took multiple courses). Of the 11,700 public high schools that offered courses for dual credit, 61 percent indicated that they offered courses for dual credit taught on a high school campus, 65 percent offered courses for dual credit taught on the campus of a postsecondary institution, and 25 percent offered courses for dual credit taught through distance education technologies.

The *Dual Enrollment* study was also published in 2005. The report notes that dual enrollment is viewed as providing high school students greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college. The report references work commissioned by the U.S. Department of

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[96] "Chapter 4. Rules Applying to All Public Institutions of Higher Education in Texas. Subchapter D. Dual Credit Partnerships Between Secondary Schools and Texas Public Colleges. §4.83 Definitions". Rules Currently in Effect. Texas Higher Education Coordinating Board. 8 February 2006. http://www.thecb.state.tx.us/Rules/Tac3.cfm?Chapter_ID=4&Subchapter=D&Print=1.

[97] "Dual Credit and Exam-Based Courses in U.S. Public High Schools: 2002-2003". Fast Response Survey System. National Center for Education Statistics. April 6, 2005. 9 February 2006. http://nces.ed.gov/surveys/frss/publications/2005009/.

[98] "Dual Enrollment of High School Students at Postsecondary Institutions: 2002-2003". Postsecondary Education Quick Information System. National Center for Education Statistics. April 6, 2005. February 9, 2006. http://nces.ed.gov/surveys/peqis/publications/2005008/.

Education's Office of Vocational and Adult Education through which the authors surveyed a wide range of research on the effects of dual credit and other 'credit-based transition programs' on college participation and success. The authors concluded that the results of these studies indicated a fairly positive finding that such programs enhance admission and retention in college, although they state that these findings must be characterized as tentative.[99]

There are 38 states that have enacted dual enrollment policies that support the development of these programs.

Nationally, 93 percent of all public two-year institutions, 64 percent of the public four-year institutions, and 29 percent of private four-year institutions had high school students taking courses within dual enrollment programs. The number of private two-year colleges offering such courses could not be reliably estimated from the survey.

Dual Enrollment was determined to be the principal method for providing high school students courses for college credit. In contrast to the total number of 'enrollments' reported in the *Dual Credit* study, the *Dual Enrollment* study estimates that not quite 680,000 students took college-level courses through a Dual Enrollment program. This estimate would mean that approximately 5 percent of all high school students took college-level courses in 2002-2003. It was also reported that high school students who take college credit courses take one course per semester. (Because of the potential for double-counting noted in the *Dual Credit* survey, these two reports are not necessarily contradictory with respect to the estimates of high school participants.

Another study identified during the preparation of this paper pertains to an analysis conducted by the Florida Department of Education[100] that analyzed the college-going experience during the 2001-2002 academic year of recent high school graduates and determined that there was a greater fraction of those students who had taken at least one dual enrollment course enrolling in both two-year and four-year public institutions in Florida than the class as a whole. 63.9 percent of those who had taken a dual enrollment course enrolled in a Florida community college or university in 2001-2002; this was in contrast to the 55.4 percent enrollment rate for the class as a whole. Enrollment rate differences were apparent for African American, Hispanic, and White Students, with the proportion of dual enrollment students going on to college even greater for Hispanic and African American students than White students.

The finding with respect to the various racial/ethnic groups is a significant relationship given the gaps in college-going rates underlying Texas' *Closing the Gaps* initiative.

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[99] Bailey, Thomas and Melinda Mechur Karp. "Promoting College Access and Success: A Review of Credit-Based Transition Programs". U.S. Department of Education, Office of Vocational and Adult Education. Washington, D.C. November, 2003. 20 February 2006. http://www.ed.gov/about/offices/list/ovae/pi/cclo/crdbase.pdf.

[100] "Dual Enrollment Students are More Likely to Enroll in Postsecondary Education". Fast Fact #79. Florida Department of Education. February 2004. 20 February 2006. http://www.fldoe.org/news/2004/2004_03_10/DualEnrollStudy.pdf.

Concurrent Enrollment/Dual Credit Programs in Texas

Texas Education Agency Data --
As a part of the Academic Excellence Indicator System prepared by the Texas Education Agency[101], there are reports of those students who have completed and obtained high school credit for at least one advanced course from a list of courses approved by the agency. 'Advanced courses' include dual enrollment courses. In 2003-2004, 19.9 percent of Texas high school students, or almost 49,000 students, were credited with having taken at least one advanced or dual enrollment course. This percent has fluctuated between 19.3 percent and 20.1 percent of the students since 1999-2000. Of note, however, are the participation rates in these courses that vary significantly by race/ethnicity and by economic status.

In 2004, 24.7 percent of the White high school students had completed some advanced/dual enrollment courses; the corresponding number for the previous year was 24.4 percent. This participation rate is in contrast to a rate of 13 percent (12.7 percent in 2003) for African American high school students and 15.5 percent (15.3 percent in 2003) for Hispanic students. Only 13.6 percent of economically disadvantaged students had completed such a course.

Texas Higher Education Coordinating Board Data –
According to THECB records[102], the utilization of dual enrollment as a means of accumulating college credits has increased significantly in recent years. The available reports reflect dual credit courses offered by Texas *public* institutions of higher education.

For the period covering Fiscal Year 2000 through Fiscal Year 2005, the number of students taking dual enrollment/dual credit courses has increased from 18,638 to 56,866 – a change of 205 percent. While it remains true that more White students take dual credit courses than do Black or Hispanic students combined, the rate of growth in dual credit course-taking among Black and Hispanic students exceeds that of White students, significantly. The growth rate in dual credit course-taking by White students was 177 percent for the 2000-2005 period while for Black students, the change was 257 percent and for Hispanic students it was 254 percent.

For all students, the number of semester credit hours (SCH) attempted, per student, per year, has remained fairly steady fluctuating between 6.65 SCH and 7.05 SCH. The vast bulk of semester credit hours provided through dual enrollment are provided by the two-year institutions. For the period FY 2000 through the first part of FY 2006, almost 98 percent of the credit hours originated from the community college and technical college

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[101] "Academic Excellence Indicator System". Texas Education Agency. 20 February 2006. http://www.tea.state.tx.us/perfreport/aeis/.
[102] Data provided by the Texas Higher Education Coordinating Board from reports prepared for the agency's P-16 Workgroup. February 2006.

sector. Eighteen Texas universities and 58 public two-year community colleges and technical institutions provided dual credit courses during this period.

One report prepared by the THECB for its P-16 Workgroup tracked a cohort of students who had been enrolled in dual credit courses while in high school through their first enrollment as regularly enrolled college students to then determine the proportion of those students who persisted to yet a second year of college work. The report then compared this persistence in higher education rate to a cohort of first-time-in-college students who had NOT taken dual credit courses while in high school. The period under examination extends from fall 1999 through fall 2001.

Seventy-nine percent of the students who had taken dual credit courses in high school were found to have persisted to a second year of college as a regularly enrolled student. This rate would appear to be significantly greater than the 56 percent persistence rate of the cohort that had NOT taken dual credit courses. This first-year-to-second-year persistence among the White dual credit course taking cohort was 80 percent; for Black students the rate was 78 percent. Seventy-seven percent of the Hispanic dual credit students returned to college for a second year. Comparable persistence rates for the NON dual credit cohort were 58 percent for White students, 49 percent for Black students, and 56 percent for Hispanic students.

While these reports do not purport that there may be a causal relationship between dual credit course taking and success through the second year of college, the results of the analyses are certainly provocative.

The UT Pan American Concurrent Enrollment Program

The UT Pan American Concurrent Enrollment Program began in September of 1994. In 1998, the program had 66 students enrolled. In FY 2003, there were 986 high school students participating in the program. In FY 2004, there were 1445. UT Pan Am is one of the largest concurrent enrollment campuses in Texas. There are 40 public high schools from 26 public school districts participating in the program. Students who are juniors or seniors in high school are eligible to participate.

Although students receive university credit for the courses they complete and pass, it is left up to the school district's discretion as to whether the high school awards dual credit for the coursework taken. The districts review the curriculum and syllabus of the UTPA course and compare it to the high school course for equivalency. District curriculum and instruction administrative personnel ascertain if dual credit will be awarded. Each district differs as to which courses will ultimately receive dual credit. Furthermore, some school districts have developed listings of courses that meet the dual credit criteria. Students use these listings for course selection purposes. Courses are offered both on-campus at UT Pan American and through distance learning at thirteen different high school campuses in the Valley area.

Students enrolling in the Concurrent Enrollment program are eligible for reduced tuition and fees allowing them to save approximately one-half or more of the cost of regular tuition and fees. Getting a head start on college level work is advantageous to the students in terms of this cost savings benefit. Many students in the program have accumulated over a year's worth of college credit by the time of high school graduation.

In order to enter the Concurrent Enrollment program high school students must meet at least one of the following criteria:

(1) Have an ACT composite of 22 or SAT composite of 1030; or
(2) Be in the top 10 percent of their class; or
(3) Have a 90 or above GPA in their academic classes; and
(4) Submit recommendations from their high school counselor and principal each semester of attendance.

Students wishing to stay in the program must earn a C or better in each course taken.

Students earning credit in the Concurrent Enrollment program may qualify for up to 4 years of financial assistance through the UT Pan American University Scholars Scholarship program. This scholarship, valued at $2,500 a year, is available to entering freshman from the South Texas area. In order to qualify, students must have 12 hours of AP or CE credit with a "B" average or 6 hours of AP or CE credit with a "B" average and an ACT score of 24 or SAT score of 1110. The University Scholars Retention rate for academic year 2003-2004 was 94.3 percent.

Student Characteristics of Selected High Schools in the UT Pan American Concurrent Enrollment Program, 2004[103]

High School	% African American Students	% Hispanic Students	% White Students	% Economically Disadvantaged Students	% Limited English Proficient Students
Donna	0.1%	98.5%	1.3%	77.5%	25.5%
Edinburg Economedes	0.2%	98.0%	1.7%	88.5%	20.7%
Edinburg	0.1%	94.1%	4.9%	72.8%	11.0%
Edinburg North	0.6%	95.5%	3.6%	82.7%	17.0%
PSJA	0.2%	98.8%	1.0%	88.8%	25.6%
PSJA Memorial	0.2%	98.0%	1.8%	91.8%	20.4%
PSJA North	0.1%	97.8%	2.0%	83.4%	20.0%
LaJoya	0.1%	99.4%	0.5%	92.5%	16.1%

[103] "2003-04 Academic Excellence Indicator System Campus Reports". Texas Education Agency. 9 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/campus.srch.html.

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African American, 38.7 percent were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF SELECTED HIGH SCHOOLS PARTICIPATING IN THE CONCURRENT ENROLLMENT PROGRAM

The recent college-going rates for the eight selected high schools that participate in the Concurrent Enrollment program at UTPA are shown in the table below. All high schools, with the exception of Economedes High School and La Joya High School, are at or above the overall state-wide college going rate of 48-49 percent. This is a fairly remarkable result given that 84.8 percent of the students of these eight Valley schools were classified as economically disadvantaged in 2004.

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in the Fall Following Graduation[104]

High School	2003	2004
Donna	42.1%	48.1%
Edinburg Economedes	44.8%	46.1%
Edinburg	53.4%	60.5%
Edinburg North	51.9%	54.5%
PSJA	51.3%	53.9%
PSJA Memorial	51.1%	51.9%
PSJA North	48.7%	59.8%
La Joya	38.9%	41.1%
State Average	48.5%	48.6%

The median high school-to-college rate for graduates of Texas public high schools for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[104] "High School to College Linkages". Texas Higher Education Data. Texas Higher Education Coordinating Board. 9 February 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.
High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures of High Schools Participating in the Concurrent Enrollment Program, 2004[105]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	Advanced Course/Dual Enrollment Completion	% Grads Found in Higher Education*
Donna	89.5%	75.1%	2.3%	16.6%	48.1%
Edinburg Economedes	77.9%	64.2%	3.8%	14.3%	46.1%
Edinburg	91.2%	81.5%	8.5%	24.2%	60.5%
Edinburg North	81.4%	78.0%	8.5%	20.8%	54.5%
PSJA	90.0%	78.3%	5.5%	41.1%	53.9%
PSJA Memorial	92.1%	84.4%	3.0%	23.0%	51.9%
PSJA North	84.4%	82.2%	1.9%	8.5%	59.8%
La Joya	80.5%	47.7%	3.9%	37.6%	41.1%

Note: *The 'Found in Higher Education' data are from the preceding table.

Another interesting observation is shown in the chart below. A large proportion of these high school students choose to attend college at either UT Pan-American in Edinburg or South Texas College in McAllen. The costs associated with attending a college influence many of these students – students commute to school to save money on housing, students can work in familiar locales close to school and home, the schools offer financial incentives for attending there, etc.

Colleges Attended in the Fall of 2004 by Students from the Eight Selected High Schools Participating in the UTPA Concurrent Enrollment Program (Computed From Total Students Found in College)[106]

High School	UT Pan-American	South Texas College
Donna	41%	35%
Edinburg Economedes	66%	23%
Edinburg	69%	14%
Edinburg North	66%	18%
PSJA	58%	33%
PSJA Memorial	60%	30%
PSJA North	61%	26%
La Joya	40%	46%

[105] "2004-2005 Academic Excellence Indicator Reports". Texas Education Agency. 9 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/campus.srch.html.
[106] "High School to College Linkages". Texas Higher Education Data. Texas Higher Education Coordinating Board. February 9, 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.

IV. OBSERVATIONS FROM THE DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

Through widely blanketed interaction between the university and the high schools in the Concurrent Enrollment services territory, the Office of Enrollment Services and the UTPA recruiters work tirelessly to inform virtually all potential post secondary students of the positive outcomes of enrolling in Concurrent Enrollment and to recruit these same students to the university. The services provided by the UTPA Concurrent Enrollment program both directly and indirectly were found to include:

- **Early Information about College** (provided in the high school grades through the school guidance office, the high school to college campus coordinator, Concurrent Enrollment staff, and UTPA Enrollment Services recruiters);
- **Family Involvement** (parents and family members are invited to a CE orientation);
- **Academic Counseling/Advising Provided by the Program** (Concurrent Enrollment academic advisors meet with students at various orientation sessions);
- **Mentors or Tutors Provided by the Program** (again through CE staff and UTPA recruiters);
- **High School to College Transition Activities Provided by the Program** (summer camps are held for CE students and an academic bridge program exists for students who have been awarded the University Scholars scholarship);
- **Assistance with College Admissions or Financial Aid Applications, or Eligibility/Placement Test Preparation** (CE staff assists with admission applications and provides financial aid referral);
- **Dual Enrollment/Dual Credit Courses** (obviously); and
- **Financial Aid to Attend College Provided by the Program** (the University Scholars Scholarship program is available exclusively to CE students).

The Concurrent Enrollment program also urges college students to “graduate on time”.

As an alternative to attending classes on the UTPA Edinburg campus, Concurrent Enrollment offers a Distance Learning program that was in place in ten high schools for fall 2005. Those schools are in: Brownsville, Hebbronville, La Joya, Harlingen (2), Raymondville, Rio Grande City, Rivera, Roma and San Benito. This program provides

computers and TVs on site at the high schools and the students view actual classes conducted by professors over a T1 line. A Gear-Up grant has helped fund a portion of this program ($37,000 annually) for the maintenance of the computers and video equipment. This spring will be the last semester that Gear Up will cover these costs. However, alliances have been formed with Region One Educational Service Center and UTPA's Video Resources Department. This cooperation has yielded savings for all parties involved and it has increased potential for more ITV distance learning sites.

A Gear-Up counselor was assigned to work with students at the middle school level and then moved up with his/her students to high school. Several accomplishments related to this grant are the funding of a parent liaison to make higher education information available to parents who might not otherwise receive it; partnerships with local businesses to assist with mentoring activities for the students; Saturday academies for honing test taking skills; funds for teacher preparation and curriculum development; the addition of college tutors to assist students with academic preparation and the employment of staff to assist students with completion of the FAFSA and the Texas Common Application.

Additional collaborations have included Gear-Up summer programs, ACEBS (Advanced College Experience in Biological Sciences), SPECS (Summer Program for Excellence in Computer Science), and a summer Microsoft program for computer science students several years ago.

Costs of Services

Estimated Costs of Services for the UT Pan American Concurrent Enrollment Program

Service	2003	2004
Concurrent Enrollment		
Program Administration	$117,421	$141,657
Reimbursement of Tuition and Fees	$90,409	$163,050
Total, Regular Program	$207,830	$304,707
Per Participant Expenses	$211	$211
Summer Residential Component (housing and reduced tuition costs)		
Total Expenses	$21,000	$21,000
Per Participant Expenses	$1,050	$1,050
Concurrent Enrollment - # of Participants	987	1445
Summer Residential Component - # of Participants	20	20

Survey of Former Participants

There were 11 former UTPA Concurrent Enrollment participants interviewed in a group focus session in the fall of 2005, all of whom were currently enrolled in college. Each

former participant was asked to indicate the relative helpfulness of each of the ten standard service categories with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. On a scale of 1 to 10, with 10 indicating that the service was most helpful to the students, the responses to the services provided by Concurrent Enrollment are illustrated below (in order of importance as referenced by the students):

Participant Opinions Regarding the Helpfulness of Services Provided by the Concurrent Enrollment Program

Service	Score
Financial Aid to Attend College Provided by the Program	9.7
Assistance w/ College Admissions or Financial Aid Applications or Eligibility /Placement Test Preparations	9.1
Early Information about College	8.8
Academic Counseling/Advising Provided by the Program	8.5
High School to College Transition Activities	8.2
Dual Enrollment/Dual Credit Courses Provided by the Program	8.2
Mentors or Tutors Provided by the Program	6.1

*Note: A score of 6.7 or greater indicates that the collective opinion is that the service was *at least* 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments, offered by the students in the survey session, are excerpted below:

"Since we take college level courses before entering the university and witness what it takes to earn a good grade, by the time we enter as a full time student we are better prepared. Not only are we prepared, but we know what to expect from all of our classes."

"This program gave me the opportunity to know my school, UTPA. During CE I learned of the services UTPA has to offer, both in academic and social areas. When I entered UTPA after graduation, it felt like family."

"The grades I earned in my university classes during CE made me eligible for the University Scholars Scholarship offered by UTPA. This scholarship (full 4 year, tuition and fees) made preparing for college much easier, at least financially. Also, the experience of being on campus helped me know what to expect when I enrolled full time."

"I believe that the whole advising service is awesome. Whenever I had a problem with suggestions as to what classes I should take, no matter what, there was always someone there to guide me."

"It gave me the necessary skills to try and "survive" my freshman year by introducing me to the actual expectations that I must meet while in college."

"So far, I'm already a sophomore because of the number of hours I was able to earn through the CE program."

VI. ADMINISTRATIVE RELATIONSHIPS

The Concurrent Enrollment program has relationships with ISDs in Starr, Hidalgo, Willacy, Cameron and Jim Hogg counties (see list of school districts in Section I above). The program has participation agreements with these school districts whereby the school district is billed directly for the cost of reduced tuition for the students enrolled in CE. The program also has a distance learning program at 13 high school sites which involves agreements with the high schools for the use of their facilities.

VII. CONCLUSIONS

Concurrent Enrollment provides high school students with a variety of opportunities and benefits to advance in a college career at UTPA.

As noted earlier, dual enrollment is viewed as providing high school students greater access to a wider range of rigorous academic and technical courses, savings in time and money on a college degree, promoting efficiency of learning, and enhancing admission to and retention in college.

Further confirmation of the positive effects of concurrent enrollment on those students who seek this avenue is illustrated in the graduation rates of CE students compared to the overall student population at UTPA.

UTPA Graduation Rates for 1999 Concurrent Enrollment Cohort[107]

CE Six Year Graduation Rate	61%
CE Five Year Graduation Rate	50%
CE Four Year Graduation Rate	33%
Overall UTPA Population Six Year Graduation Rate	29.61%

Furthermore, statistics obtained from the CE administrators demonstrate that concurrent enrollment students persist through the higher education pipeline at rates greater than that of the overall student population. From fall 2003 to fall 2004, CE students persisted to a second year of college at a rate of 85 percent while all other UTPA entering freshmen persisted at a rate of 66.4 percent. From fall 2004 to fall 2005 the CE persistence rate to a second year was 96 percent; all other entering freshmen persisted at a rate of 68.0 percent.

Concurrent Enrollment students mirror the populations targeted by the state's 'closing the gaps' initiative. In 2004, greater than 89.6 of their students were Hispanic and/or

[107] Division of Enrollment and Student Services. The University of Texas – Pan American.

Black and 59.8 of their students were categorized as economically disadvantaged. The Study data illustrate that 92.5 percent of the 2003 high school graduates of the program were found in higher education institutions in Texas in the year following graduation and that 93.5 percent of these students persisted to at least the sophomore year of college. Also, these students (2003) were found to have enrolled in college at rates greater than 15.0 percent of all high school graduates and at rates 20.5 percent greater than the program's reference groups.

CE students benefit financially from the reduced tuition and waived fees. In accordance with Texas Higher Education Coordinating Board rules, students may enroll in up to two classes per term. Students may take a minimum of three semester credit hours and up to a maximum of 48 semester hours prior to high school graduation. The potential college savings to the CE student and family can amount to thousands of dollars.

For the 2005-06 academic year, tuition and fees alone for 15 semester credit hours at a public university in Texas were expected to average $2,429 for a Texas resident. Add to that the estimated cost of room and board, transportation and personal expenses, and the total cost for a semester at a university could easily approach $7,350. (Books and supplies are not included in this comparison because there will be similar costs for Dual Enrollment students.)

Similarly, enrollment for 15 hours at the typical public community college in Texas (for a resident of the college district) was estimated to cost $746.50 in tuition. For a student who does not reside in the college taxing district the cost in 2005-06 would be an estimated $1,643. Add to that the potential costs of living away from home, transportation, and other expenses not necessarily incurred by a high school student taking comparable courses at the high school and the savings due to a dual credit alternative are significant.

Depending on the policies of the particular community college, Dual Credit students may not be charged any tuition, or pay tuition that is typically one-half the average for Texas public universities, as well as pay for books and supplies. Since the typical high school student is still living at home, room and board and other living expenses a student may pay when going away to college will not be incurred.

More information about Texas' College Student Costs, as well as other resources for students and high school counselors has been prepared by the Texas Higher Education Coordinating Board. A particularly valuable document may be reviewed at the following site:
http://www.thecb.state.tx.us/reports/PDF/0826.PDF. It is subtitled: "Higher Education Opportunities in Texas—A Summary".[108]

The dual enrollment option is an exceptional opportunity for students to begin earning a college degree, at little or no cost, while still fulfilling high school graduation

[108] "Coordinating Board Presentation to P-12 Counselors, Fall 2005". Texas Higher Education Coordinating Board. http://www.thecb.state.tx.us/reports/PDF/0826.pdf.

requirements. The savings to parents and students are substantial and the head start in higher education will give these students a significant advantage in the future.

Another significant reason that has been cited as an advantage for students and schools participating in dual credit/dual enrollment programs is that such programs directly address the goal of a seamless P-16 educational experience.

THE UNIVERSITY OF TEXAS AT SAN ANTONIO PREFRESHMAN ENGINEERING PROGRAM (SA PREP)

I. ADMINISTERING INSTITUTION(S); COLLABORATORS

The PREP Program that is the focus in this Study is administered by the University of Texas at San Antonio. Since 1986, the San Antonio program has been replicated in 10 other Texas cities. Those cities include Arlington, Austin, Corpus Christi, Edinburg, El Paso, Fort Worth, Harlingen, Houston, Laredo, and Lubbock. Again, this synopsis will review the program in San Antonio, exclusively.

In 2004, the Central Texas school districts participating in the SA PREP program were:

Alamo Heights ISD	Archdiocese of San Antonio	Bandera ISD
Boerne ISD	Charter Schools	Comal ISD
East Central ISD	Edgewood ISD	Fort Sam Houston ISD
Harlandale ISD	Home Schooled Students	Hondo ISD
Judson ISD	Lackland ISD	Lytle ISD
Medina Valley ISD	Natalia ISD	North East ISD
Northside ISD	Other Out of Town Districts	Pearsall ISD
Poteet ISD	Private School Students	Randolph ISD
San Antonio ISD	Schertz-Cibolo ISD	Seguin ISD
Somerset ISD	South San Antonio ISD	Southside ISD
Southwest ISD	Uvalde-Batesville ISD	

Of those school districts listed above, Northside ISD, San Antonio ISD, Harlandale ISD, Northeast ISD and South San Antonio ISD had the largest number of student participants in the program. They are all located in Bexar County.

II. BACKGROUND INFORMATION

The San Antonio TexPREP (SA PREP) program was established in 1979. SA PREP literature states that the mission of the program is to provide a challenging academic program designed to motivate and prepare middle and high school students for success in advanced studies leading to careers in science, technology, engineering, or math fields[109]. The program is an academically intense, eight-week mathematics-related summer program that stresses the development of abstract reasoning, problem solving skills and their application. SA PREP particularly encourages the participation of females and members of minority groups who traditionally have been underrepresented in these fields.[110]

[109] "San Antonio Prefreshman Engineering Program 2004 Annual Report". The University of Texas at San Antonio.
[110] Ibid.

The goals of the program are to increase the number of competently prepared students from the San Antonio area who will ultimately pursue engineering, science, technology, and mathematics studies in college and to increase the retention rate of these students as they progress through college by: acquainting these students with professional opportunities in engineering and science; reinforcing the academic preparation of these students at the secondary school level; and creating an environment in which talented students are encouraged to learn, explore, achieve, and discover.[111]

The three year summer curriculum for SA PREP students is illustrated below:

Year 1
- Logic and its Applications to Mathematics – 50%
- Introduction to Engineering – 10%
- Introduction to Computer Science – 10%
- Problem Solving – 20%
- Research and Study (Presentation Journal) – 10%

Year 2
- Algebraic Structures – 40%
- Introduction to Physics – 25%
- Problem Solving – 25%
- Research and Study (Presentation Journal) – 10%

Year 3
- Introduction to Technical Writing – 30%
- Probability and Statistics – 30%
- Problem Solving – 30%
- Research and Study (Presentation Journal) – 10%

All Years
- Field Trips
- Career Awareness Seminars[112]

In 2004, SA PREP was held from June 7 through July 29 and 1,168 students began the program. There were 186 schools from 30 school districts participating in the SA PREP program in addition to various private and charter schools. Home-schooled students were also invited to participate. A total of 1079 students completed the program – 483 in Year 1, 328 in Year 2, and 268 in Year 3.[113]

Since 1979, 78 percent of the SA PREP program graduates have been members of ethnic minority groups traditionally underrepresented in the fields of mathematics, science and engineering; 55 percent of the graduates have been female; and 38 percent of the graduates have been defined as representing economically

[111] Ibid.
[112] Ibid.
[113] Ibid.

disadvantaged families.[114] Since 1979, when the program began, 11,120 students have completed at least one summer component.[115]

In an analysis of the 1993 student cohort to the 2005 student cohort, the following data illustrate the tenure of students in the SA Prep program.

Tenure of Student-Participants in the SA Prep Program

	Years Completed		
	One	**Two**	**Three**
Number of Students	7613	3875	2596
Percent of Total	100%	50.9%	34.1%

To be eligible for participation in the SA PREP program a student must have:

Year 1
- Parental permission
- Recommendations from a mathematics teacher and a counselor, science or English teacher
- Satisfactory conduct grades and an essay
- Students in grades 6 and 7 require a 90 average in mathematics and science or English (85 or better if in honors or advanced placement)
- Students in grades 8, 9, and 10 require an 85 average in mathematics and science or English (80 or better if in honors or advanced placement)
- Students in grades 11 and 12 are admitted with special permission only

Year 2 and Year 3
- Students successfully completing Year 1 or 2 are invited to apply for the following year[116]

SA PREP receives financial and full-time in-kind staff support from public and private sectors: colleges and universities, the State of Texas, NASA, government agencies, public and private industry, individuals, school districts, the City of San Antonio, the Texas Health and Human Services Commission's Summer Food Service Program, and the Alamo Workforce Development, Inc. Transportation and daily free lunch are available to eligible low-income students through support provided by the Texas Health and Human Services Commission's Summer Food Service Program and the City of San Antonio.[117]

Most participating public schools provide funding for their students to participate in SA PREP. For students from private schools, parents generally pay the student tuition. For

[114] Ibid.
[115] Ibid.
[116] "San Antonio Prefreshman Engineering Program – 2004 Facts". The University of Texas at San Antonio.
[117] Ibid.

students from parochial schools, the tuition is generally covered by a grant. If funding is not provided by the school, the cost of the summer program is $300 per student.

Since 1992, the Texas Education Agency has approved a request to grant academic credit to the students who attend SA PREP. One (1) unit of elective credit is applied to a student's transcript for each summer session that is completed.

Selected Student Characteristics of the Larger School Districts (in Terms Of Student Participation) in the SA Prep Program, 2004[118]

School District	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Northside	7.3%	58.7%	31.3%	43.4%	6.1%
San Antonio	8.8%	87.2%	3.6%	90.0%	17.0%
Harlandale	0.5%	94.8%	4.4%	89.4%	15.0%
North East	9.5%	41.9%	45.3%	36.8%	4.8%
South San Antonio	1.5%	95.3%	2.9%	89.9%	17.9%

Statewide in 2004, 43.8 percent of students in all grades were Hispanic, 14.3 percent were African American, 38.7 percent were White, 52.8 percent were Economically Disadvantaged, and 15.3 percent were classified as Limited English Proficient.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF SELECTED HIGH SCHOOLS PARTICIPATING IN THE UTSA TEXPREP PROGRAM

Typically, students are recruited into the SA PREP program in the 6th or 7th grade. Selected middle schools that have a larger percentage of SA PREP participants than others are referenced below with the high schools that a majority of those middle school students matriculate to. The following table then references college going rates for those respective high schools.

Kingsborough MS (Harlandale ISD) → Harlandale HS (10%); McCollum HS (90%)
Anson Jones MS (Northside ISD) → John Jay HS (100%)
Abraham Kazen MS (South San Antonio ISD) → South San Antonio HS (100%)
Rhodes MS (San Antonio ISD) → Lanier HS (80-90%)

[118] "2003-04 Academic Excellence Indicator System District Reports". Texas Education Agency. 11 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

Percent Of Graduates Found in Texas Public and Private Institutions of Higher Education in the Fall Following High School Graduation[119]

The following table illustrates the recent college-going experience for all graduates of the respective high schools.

High School	2003	2004
Harlandale (Harlandale ISD)	45%	47%
McCollum (Harlandale ISD)	47%	48%
Jay (Northside ISD)	42%	36%
South San Antonio (South San Antonio ISD)	47%	42%
Lanier (San Antonio ISD)	49%	51%
State Average	48.5%	48.6%

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

Selected Performance Measures of High Schools Participating in the SA PREP Program, 2004[120]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT/ACT	% Examinees At or Above SAT/ACT Criterion	% Of Grads Found in Higher Education
Harlandale	77.8%	49.4%	3.9%	47%
McCollum	86.8%	42.1%	4.2%	48%
Jay	58.8%	55.8%	8.4%	36%
South San Antonio	62.0%	51.9%	3.2%	42%
Lanier	76.1%	72.5%	2.8%	51%
State Average	68.4%	61.9%	27.0%	48.6%

[119] "High School to College Linkages". Texas Higher Education Data. Texas Higher Education Coordinating Board. 11 February 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm. High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year and four-year institutions of higher education.

[120] "2004-05 Academic Excellence Indicator System Campus Reports". Texas Education Agency. 11 February 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/campus.srch.html.

IV. OBSERVATIONS FROM THE DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

Students enrolled at the partnering middle schools are introduced to the value of participating in SA PREP during recruitment presentations made by SA PREP staff members. Guidance counselors, teachers, principals, and parents of former students in the program also encourage students to investigate the program. Students are typically inducted into the program in grades 6 or 7 and are encouraged to participate for 3 succeeding summer sessions. Because of the program's rigorous curriculum, students who are high achievers are targeted; however, these high achieving students are often enrolled in schools that historically have not had strong academic programs. Because of this fact, many potential SA PREP students may actually be lagging behind their contemporaries, academically, who are attending schools with a more academically challenging curriculum. The environment within the program is designed to foster academic success through the teaching of study skills and self-discipline. Additionally, one of the program's goals is to provide sufficiently rigorous academic components in an effort to close the gaps between the challenged and the less than challenged student.

With respect to the Study's ten service elements, the following services to participants are provided by the program:

- Early Information about College (students are inducted into the program in middle school with the goal of providing skills for academic success and future college matriculation);
- Family Involvement (students are required to obtain parental permission to participate, parents attend an annual orientation session in May prior to the start of the summer session, parents attend the graduation ceremony at the end of the summer session);
- Academic Counseling/Advising (academic counselors provide assistance to students in the area of time management skills, goal setting, test anxiety tips and others);
- Mentors or Tutors Provided by the Program (counselors are available to students);
- Development of Study Skills or Special Academic Skills;
- High School-to-College Transition Activities (PREP classes are held on college campuses and this exposure to college life helps demystify the college environment);

- Cultural, Social, or Co-Curricular Educational Activities or Events (the program provides information on college and job opportunities through daily career awareness speakers, field trips and association with role models); and
- Financial Aid to Attend College Provided by the Program (each year the program awards college scholarships to financially deserving, third year students exhibiting academic excellence).

SA PREP administrators feel that they are specifically addressing the primary goals of the Closing the Gaps initiative by increasing community college and university participation and success by Texas populations underrepresented in higher education. Their recruitment strategies focus on ethnic minority populations (especially the Hispanic population) and female students. The Study data validates this with roughly 76 percent of their program participants being either Hispanic or Black, 49 percent of their students categorized as economically disadvantaged, and 60 percent of their high school graduates being female.

Costs of Services

Estimated Costs of Services Provided by the SA Prep Program

Service	2003	2004
Regular Program		
Total Expenses	$ 956,998	$937,780
Per Participant Expenses	$752.95	$790.71
Field Trips (co-curricular activities)		
Total Expenses	$143,984	$140,240
Per Participant Expenses	$113.28	$118.25
Regular Program--No. of Participants	1,271	1,168
Field Trips--No. of Participants	1,271	1,168

Survey of Former Participants

There were nine former SA PREP participants surveyed by mail in the fall of 2005, all of whom were currently enrolled in college. Each former participant was asked to indicate the relative helpfulness of each of the ten standard service categories offered by SA PREP with respect to their decisions to go to college and regarding their preparations to succeed once enrolled. On a scale of 1 to 10, with 10 indicating that the service was most helpful to the students, the responses to the services provided by SA PREP are illustrated below (in order of importance as referenced by the students).

Participant Opinions Regarding the Helpfulness of Services Provided by the SA PREP Program

Service	Score
High School to College Transition Activities	9.6
Early Information about College	7.0
Development of Study/Academic Skills	6.7
Mentors or Tutors Provided by Program	6.7
Academic Counseling/Advising	5.6
Cultural, Social, or Co-Curricular Activities Provided by the Program	3.3
Family Involvement	1.9

*Note: A score of 6.7 or greater indicates that the collective opinion is that the service was at least 'Mostly Helpful'. A score of 10.0 would indicate that all respondents considered the service 'Absolutely Helpful'.

The following comments are excerpted from the surveys:

"The program has helped me prepare for college by teaching me how to study at the college level and also how to seek out tutoring and assistance on college campuses."

"The classes were very helpful. I used them both in high school and college. I still have all of my notes."

"The Program is great for students wishing to learn math, science or engineering."

"Difficult subject matter was presented to us during the program. By college I had the study habits which aided me greatly."

"The program did help me with my study skills which has definitely helped me to succeed."

VI. ADMINISTRATIVE RELATIONSHIPS

In 2004, SA PREP participants represented 186 schools spread across 30 different school districts in the Central Texas area. SA PREP personnel characterize their relationships with participating schools as positive. There are data-sharing agreements in place whereby SA PREP communicates a student's performance to each respective school. The majority of the participating schools provide financial support for their students to attend the program and SA PREP personnel rely on the schools to promote the program to their students.

VII. SELF-EVALUATIONS

During the summer of 2004, the SA PREP office conducted a follow-up survey of all former participants. Of the 7,702 former participants who were of college age, 4,189 responded to the 2004 annual survey.

The results are summarized below:

- 99.9% are high school graduates
- 94% are college students (1,937) or senior college graduates (2,005)
- 89% of the college attendees are college graduates
- 76% of the college graduates are members of minority groups
- 47% of the college graduates are science, mathematics or engineering majors
- 70% of the science, mathematics and engineering graduates are members of minority groups
- 89% of the college students (1,864), junior college graduates (97), and senior college/university graduates (1,663) attended Texas colleges
- 53% of the college students (1,275), junior college graduates (76), and senior college/university graduates (792) attended San Antonio area colleges[121]

VIII. CONCLUSIONS

The PREP program combines four of the key service elements that the Study has determined play a significant role in student college matriculation. Because the program intervenes with the students at the middle school level, it is delivering "true" early information about the benefits of continuing to higher education to the student participants. The rigorous curriculum that is provided the students through this program strengthens their core academic skill set, particularly in the areas of math and science. They acquire strong study skills as a result of the intensity of the courses they take. They are also provided with a college environment for the summers they participate in the program as the program delivers its services to the students on the UTSA campus.

For the SA PREP participants who were part of the high school graduating class of 2004, almost 80 percent were found in college in the year after high school graduation. Of this graduating class, for those found in college, their matriculation rate was 35.5 percent greater than all high school graduates and 48.3 percent greater than their comparable reference group. This outcome is statistically significant.

[121] "San Antonio Prefreshman Engineering Program 2004 Annual Report". The University of Texas at San Antonio.

VICTORIA COLLEGE HIGH SCHOOL OUTREACH PROGRAM

I. ADMINISTERING INSTITUTION(S); COLLABORATORS

The Victoria College High School Outreach Program is administered by Victoria College, Victoria, Texas. Collaborating school districts include Victoria ISD in Victoria County; Calhoun County ISD in Calhoun County; Edna ISD and Industrial ISD in Jackson County; Cuero ISD in Dewitt County; Shiner ISD and Hallettsville ISD in Lavaca County; and Goliad ISD in Goliad County.

II. BACKGROUND INFORMATION

The Victoria College High School Outreach Program was begun in October of 2002. It is a recruitment tool for the college but, in coordination with other departments at the college, provides information about career choices, college life, financial aid, admission procedures, degree options, campus tours and parent outreach. The program targets minority and/or economically disadvantaged students and students who are potential first generation college attendees. High Schools served by the program include Memorial High School – Victoria; Calhoun High School; Edna High School; Cuero High School; Shiner High School; Goliad High School; Hallettsville High School; and Industrial High School.

Selected Student Characteristics of School Districts Participating in the Victoria College High School Outreach Program, 2004[122]

School District	% African American	% Hispanic	% White	% Economically Disadvantaged	% Limited English Proficient
Victoria	8.4%	53.0%	37.4%	53.0%	3.0%
Calhoun County	2.4%	54.4%	39.0%	55.1%	7.6%
Edna	13.9%	35.2%	50.7%	47.3%	6.9%
Cuero	13.3%	35.8%	50.6%	50.8%	0.8%
Shiner	16.8%	11.8%	70.8%	42.3%	1.5%
Goliad	6.2%	42.0%	51.5%	45.3%	2.8%
Hallettsville	12.0%	9.5%	78.6%	33.8%	0.9%
Industrial	2.0%	18.8%	78.8%	30.3%	1.3%

State-wide in 2004, 43.8 percent of students in all grades were Hispanic, 38.7 percent were White, 14.3 percent were African-American, 52.8 percent were economically disadvantaged, and 15.3 percent were classified as limited English proficient.

[122] "2003-04 Academic Excellence Indicator System District Reports". Texas Education Agency. 25 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2004/district.srch.html.

III. COLLEGE-GOING EXPERIENCE OF GRADUATES OF HIGH SCHOOLS PARTICIPATING IN THE VICTORIA COLLEGE HIGH SCHOOL OUTREACH PROGRAM

Included in the table below are college-going rates of students graduating from the high schools participating in the Victoria College High School Outreach Program.

Percent of Graduates Found in Texas Public and Private Institutions of Higher Education in the Fall Following Graduation[123]

High School	2003	2004
Victoria Memorial	54%	54%
Calhoun	61%	51%
Edna	48%	46%
Cuero	51%	53%
Shiner	60%	73%
Goliad	58%	53%
Hallettsville	54%	58%
Industrial	64%	55%
State Average	48.5%	48.6%

The median high school-to-college rate for 2004 was 47.7 percent and rates equal to or greater than 56.2 percent would place a school in the top quarter of Texas high schools.

[123] "High School to College Linkages". Texas Higher Education Coordinating Board. 25 January 2006. http://www.txhighereddata.org/Interactive/HSCollLink.cfm.
High school graduates with invalid social security numbers or no SSNs are reported in the THECB reports as 'Not Found' in higher education. Those students reported as 'college-going' or enrolled in higher education represent only those students found in **Texas** public or private two-year or four-year institutions of higher education.

Selected Performance Measures, Victoria College
High School Outreach Target High Schools, 2004[124]

High School	% Grads with Recommended/ Distinguished Diploma	% Grads Taking SAT or ACT	% Examinees At or Above SAT/ACT Criterion	% HS Grads Found in Higher Education
Victoria Memorial	70.5%	41.2%	27.7%	54%
Calhoun	84.0%	41.9%	27.8%	51%
Edna	54.0%	59.1%	20.0%	46%
Cuero	56.3%	57.3%	28.0%	53%
Shiner	72.5%	86.5%	28.1%	73%
Goliad	18.8%	84.6%	30.9%	53%
Hallettsville	61.8%	56.0%	31.0%	58%
Industrial	69.7%	60.0%	31.0%	55%
State Average	68.4%	61.9%	27.0%	48.6%

IV. OBSERVATIONS FROM THE PARTICIPANT DATA

Tables illustrating the demographic characteristics of the participant-graduates of this program and the college enrollment outcomes of these high school graduates who could be found in Texas higher education may be found in Appendices C and D.

V. SERVICES

The Victoria College High School Outreach program provides the following standard services to its prospective students:

- Early Information about College
- Academic Counseling/Advising
- Assistance with College Admissions or Financial Aid Applications, or Eligibility/Placement Test Preparations
- High School to College Transition Activities

The Victoria College High School Outreach coordinator makes contact with each high school in the service area. She makes 45 minute presentations in the senior English classes and includes information about college classes, activities, admissions procedures (applications, deadlines, testing requirements), financial aid (FAFSA and scholarships), degree options, certificate programs, and student support services options. She is then available at the high schools during specified times to students desiring further information. Once a student has made contact requesting additional information, that student is added to a mailing list for receipt of all admission related information. Victoria College also provides instructors to speak upon request to high

[124] "2004-2005 Academic Excellence Indicator System". Texas Education Agency. 25 January 2006. http://www.tea.state.tx.us/perfreport/aeis/2005/html.

school students about specific careers and programs of study. There are college representatives that are available to meet with high school students on an individual basis to provide support with admissions and financial aid paperwork. Visits are scheduled on an as-needed basis. These representatives also provide help with tutoring for the THEA.

In the spring of each year, the Victoria College recruiting staff along with the Educational Opportunity Center and other campus organizations hosts the Spring Connection, an important, day-long, recruiting event for the college. 85 seniors from the targeted high schools are chosen to attend based on whether they fall into one or more of the following categories: minority students, first generation students, and/or economically-disadvantaged students. The event, which encourages participation by students and their parents, includes a luncheon, various college information breakout sessions, a campus tour, a family carnival and student information booths.

Victoria College also participates in the University of Houston – Victoria Letting Education Achieve Dreams (LEAD) program. This program provides campus tours to prospective students that are conducted by the G-force student organization. Area schools visit the campus and students have the opportunity to learn about higher education options that are available to them after high school. Students participating in the tours are 7th – 10th graders.

The Victoria College High School Outreach program is supported, in part, by the Educational Opportunity Center, federally funded through the TRIO program. The EOC provides free assistance with college admission applications, FAFSA applications, TASP/THEA Tutoring, student interest assessments, career exploration and academic advisement.

Costs of Services

Estimated Costs of Services Provided by the Victoria College High School Outreach Program

Service	2003	2004
Student Outreach		
Total Expenses	$39,953	$41,653
Per Participant Expenses	$128	$115
Spring Connection		
Total Expenses	unknown	$6,000
Per Participant Expenses	unknown	$8.38
Student Outreach - # of Participants	311	363
Spring Connection - # of Participants	unknown	716

Survey of Former Participants

Students now enrolled at Victoria College who were recipients of services through the Victoria College High School Outreach program noted in interviews that several services were key elements in their decisions to enroll in college. Those services most important to those decisions were determined by the students to be:

- Academic Counseling/Advising Activities Provided by the Program
- Dual Enrollment/Dual Credit Courses **Provided by the College**
- Assistance with College Admissions or Financial Aid Applications, or Eligibility/Placement Test Preparations Provided by the Program

VI. ADMINISTRATIVE RELATIONSHIPS

Victoria College High School Outreach has agreements with the targeted high schools that allow representatives from the college to make presentations on campus to the senior English classes, to set up a booth on campus to provide information about the college, to allow students to confer with representatives during class time concerning college options, and to include representatives from the college in certain activities on the high school campuses.

VII. CONCLUSIONS

The Victoria College High School Outreach program initially touches all senior students in the targeted high schools within a regional proximity to the college. This is accomplished through classroom presentations. For those students who express an interest in the college or seek additional assistance with college or financial aid applications, there is a support network at the college that provides information or hands-on help with navigating through pre-college testing requirements (THEA, ACT, SAT), financial aid avenues (FAFSA and scholarships), and the Texas Common Application.

This program provides a key element that has been identified by the Study as critical to student matriculation into college. Assistance with financial aid and college admission applications and processes and information/preparation help for college entrance examinations are important navigation steps into higher education. The Study data illustrate that 64.5 percent of the 2003 high school graduates of the program were found in higher education institutions in Texas in the year following graduation and that 86.4 percent of these students persisted to at least the sophomore year of college. Also, these students (2003) were found to have enrolled in college at rates 13.7 percent greater than did all high school graduates and at rates 16.7 percent greater than the program's reference group.

APPENDIX C

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

SAMPLE PROGRAMS DEMOGRAPHICS TABLES

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

DEMOGRAPHICS TABLE - HIGH SCHOOL GRADUATES OF SELECTED PROGRAMS

Program/HS Grad Class	Number HS Grads	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged Students	% Economically Disadvantaged AND Black Students	% Economically Disadvantaged AND Hispanic Students	% Economically Disadvantaged AND White Students	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students with Plans to Go to College
Austin Community College													
***College Connection* Program**													
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	284	4.9%	56.7%	37.3%	54.2%	45.8%	41.5%	N/A	31.0%	8.5%	82.7%	58.8%	63.4%
Total	284	4.9%	56.7%	37.3%	54.2%	45.8%	41.5%	N/A	31.0%	8.5%	82.7%	58.8%	63.4%
Blinn College Dual Credit Program													
2002	355	2.5%	3.4%	93.0%	61.1%	38.9%	5.4%	N/A	N/A	3.4%	95.8%	5.4%	90.1%
2003	413	3.1%	3.4%	92.3%	64.6%	35.4%	4.6%	N/A	1.5%	2.2%	97.6%	6.3%	91.0%
2004	489	2.2%	5.1%	91.8%	62.4%	37.6%	6.7%	1.2%	1.2%	4.3%	98.0%	10.6%	90.6%
Total	1257	2.6%	4.1%	92.3%	62.8%	37.2%	5.6%	0.5%	1.0%	3.3%	97.2%	7.7%	90.6%
Prairie View A&M University													
ACCESS Program													
2002	64	85.9%	12.5%	N/A	60.9%	39.1%	35.9%	25.0%	9.4%	N/A	60.9%	46.9%	90.6%
2003	67	92.5%	N/A	N/A	53.7%	46.3%	25.4%	22.4%	N/A	N/A	73.1%	40.3%	89.6%
2004	87	87.4%	11.5%	N/A	49.4%	50.6%	43.7%	34.5%	8.0%	N/A	71.3%	56.3%	92.0%
Total	218	88.5%	8.3%	0.0%	54.1%	45.9%	35.8%	28.0%	6.0%	0.0%	68.8%	48.6%	90.8%
Texas Tech University													
Upward Bound Program													
2002	28	21.4%	71.4%	N/A	42.9%	57.1%	39.3%	N/A	35.7%	N/A	82.1%	28.6%	92.9%
2003	19	N/A	73.7%	N/A	47.4%	52.6%	63.2%	N/A	47.4%	N/A	84.2%	N/A	94.7%
2004	28	N/A	78.6%	N/A	67.9%	32.1%	60.7%	N/A	50.0%	N/A	82.1%	39.3%	89.3%
Total	75	8.0%	74.7%	0.0%	53.3%	46.7%	53.3%	0.0%	44.0%	0.0%	82.7%	25.3%	92.0%
Texas State Rural Talent Search Program													
2002	74	13.5%	55.4%	31.1%	60.8%	39.2%	43.2%	8.1%	24.3%	10.8%	85.1%	20.3%	83.8%
2003	78	11.5%	56.4%	30.8%	57.7%	42.3%	46.2%	7.7%	32.1%	6.4%	78.2%	33.3%	71.8%
2004	98	10.2%	66.3%	21.4%	61.2%	38.8%	43.9%	N/A	33.7%	5.1%	76.5%	62.2%	69.4%
Total	250	11.6%	60.0%	27.2%	60.0%	40.0%	44.4%	4.8%	30.4%	7.2%	79.6%	40.8%	74.4%
University of North Texas													
Talent Search Program													
2002	185	18.9%	30.3%	49.2%	61.6%	38.4%	24.9%	8.6%	11.9%	4.3%	61.6%	24.3%	58.9%
2003	237	18.6%	22.8%	55.7%	65.4%	34.6%	27.0%	5.1%	10.5%	11.0%	67.1%	28.3%	81.9%
2004	222	21.2%	26.1%	51.4%	64.9%	35.1%	34.7%	8.6%	11.3%	14.0%	68.9%	37.8%	71.6%
Total	644	19.6%	26.1%	52.3%	64.1%	35.9%	29.0%	7.3%	11.2%	10.1%	66.1%	30.4%	71.7%
Fort Worth Independent School District													
HB 400 Program													
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	224	31.3%	54.5%	12.9%	66.5%	33.5%	53.6%	12.9%	34.4%	6.3%	57.6%	66.1%	61.2%
2004	341	36.4%	48.4%	13.2%	53.7%	46.3%	61.9%	18.5%	34.6%	7.6%	69.8%	61.6%	78.6%
Total	565	34.3%	50.8%	13.1%	58.8%	41.2%	58.6%	16.3%	34.5%	7.1%	65.0%	63.4%	71.7%

DEMOGRAPHICS TABLE - HIGH SCHOOL GRADUATES OF SELECTED PROGRAMS (CONTINUED)

Program/HS Grad Class	Number HS Grads	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged Students	% Economically Disadvantaged AND Black Students	% Economically Disadvantaged AND Hispanic Students	% Economically Disadvantaged AND White Students	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students with Plans to Go to College
UT Austin University Outreach Centers [1]													
2002	255	10.6%	85.5%	2.4%	65.9%	34.1%	68.2%	3.9%	63.9%	N/A	80.8%	47.1%	78.8%
2003	305	23.3%	70.2%	4.6%	63.9%	36.1%	68.5%	11.1%	54.4%	N/A	85.9%	44.6%	91.8%
2004	300	22.3%	71.3%	5.3%	58.3%	41.7%	63.0%	9.7%	51.0%	2.3%	87.3%	53.7%	88.3%
Total	860	19.2%	75.1%	4.2%	62.6%	37.4%	66.5%	8.5%	56.0%	0.8%	84.9%	48.5%	86.7%
UT Dallas SAT Prep Program													
2002	71	78.9%	8.5%	N/A	59.2%	40.8%	62.0%	43.7%	7.0%	N/A	85.9%	19.7%	97.2%
2003	38	76.3%	N/A	N/A	60.5%	39.5%	47.4%	34.2%	N/A	N/A	86.8%	26.3%	81.6%
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	109	78.0%	5.5%	0.0%	59.6%	40.4%	56.9%	40.4%	4.6%	0.0%	86.2%	22.0%	91.7%
UT Pan American Concurrent Enrollment Program													
2002	406	N/A	91.4%	7.6%	62.1%	37.9%	57.6%	N/A	55.9%	1.5%	99.5%	11.1%	94.8%
2003	413	N/A	93.7%	3.9%	61.0%	39.0%	63.0%	N/A	62.0%	N/A	99.8%	11.4%	97.3%
2004	460	N/A	89.6%	7.2%	65.4%	34.6%	59.8%	N/A	57.6%	1.7%	100.0%	9.8%	89.8%
Total	1279	0.0%	91.5%	6.3%	62.9%	37.1%	60.1%	0.0%	58.5%	1.1%	99.8%	10.7%	93.8%
UT San Antonio Prefreshman Engineering Program													
2002	456	9.0%	65.4%	20.4%	52.4%	47.6%	39.9%	1.3%	35.5%	2.9%	80.3%	24.3%	80.9%
2003	469	6.6%	69.3%	19.2%	57.6%	42.4%	49.7%	1.7%	43.5%	3.4%	87.0%	22.4%	82.5%
2004	473	7.0%	69.3%	18.2%	59.0%	41.0%	49.0%	2.5%	40.4%	4.9%	91.5%	35.9%	85.6%
Total	1398	7.5%	68.0%	19.2%	56.4%	43.6%	46.3%	1.9%	39.8%	3.7%	86.3%	27.6%	83.0%
Victoria College High School Outreach Program													
2002													
2003	183	9.8%	44.8%	43.2%	65.0%	35.0%	24.6%	3.3%	16.4%	3.8%	72.1%	30.6%	80.9%
2004	182	8.8%	40.7%	50.0%	68.7%	31.3%	29.1%	4.9%	15.9%	8.2%	78.0%	31.9%	77.5%
Total	365	9.3%	42.7%	46.6%	66.8%	33.2%	26.8%	4.1%	16.2%	6.0%	75.1%	31.2%	79.2%
Financial Aid Officers for Selected Rio Grande Valley High Schools													
2002	1839	N/A	95.5%	N/A	49.5%	50.5%	75.8%	N/A	74.2%	N/A	76.4%	56.2%	84.3%
2003	1924	N/A	96.4%	N/A	49.4%	50.6%	79.1%	N/A	77.6%	N/A	81.5%	56.2%	84.2%
2004	2057	N/A	95.9%	N/A	50.3%	49.7%	79.7%	N/A	77.5%	N/A	86.2%	57.6%	77.8%
Total	5820	0.0%	95.9%	0.0%	49.8%	50.2%	78.3%	0.0%	76.5%	0.0%	81.5%	56.7%	82.0%

1. Includes Austin, Dallas, and Rio Grande Valley Sites

DEMOGRAPHICS TABLE - GRADUATES OF SELECTED PROGRAMS FOUND IN COLLEGE ANYTIME AFTER HIGH SCHOOL GRADUATION[2]

Program/HS Grad Class	% of HS Grads Found	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged	% Economically Disadvantaged AND Hispanic Students	% Economically Disadvantaged AND Black Students	% Economically Disadvantaged AND White Students	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students w/ Plans to Go to College
Austin Community College													
***College Connection* Program**													
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	61.6%	7.4%	45.1%	45.7%	54.9%	45.1%	28.6%	9.5%	0.0%	4.6%	90.3%	45.7%	77.1%
Total	61.6%	7.4%	45.1%	45.7%	54.9%	45.1%	28.6%	9.5%	0.0%	4.6%	90.3%	45.7%	77.1%
Blinn College Dual Credit Program													
2002	94.4%	2.7%	3.3%	93.1%	61.8%	38.2%	4.5%	0.0%	0.0%	2.5%	96.4%	5.4%	91.0%
2003	92.5%	2.4%	2.9%	93.7%	65.2%	34.8%	4.2%	0.0%	0.0%	2.2%	97.6%	6.0%	91.9%
2004	93.5%	2.2%	5.0%	92.1%	63.7%	36.3%	6.1%	1.0%	1.2%	3.5%	98.5%	10.5%	92.1%
Total	93.4%	2.4%	3.8%	92.9%	63.6%	36.4%	5.0%	0.4%	0.5%	2.8%	97.6%	7.6%	91.7%
Prairie View A&M University													
ACCESS Program													
2002	96.9%	85.5%	12.9%	N/A	61.3%	38.7%	35.5%	9.4%	23.4%	0.0%	61.3%	45.2%	90.3%
2003	95.5%	93.8%	N/A	N/A	53.1%	46.9%	23.4%	0.0%	20.9%	0.0%	75.0%	39.1%	92.2%
2004	95.4%	89.2%	9.6%	N/A	48.2%	51.8%	44.6%	6.9%	34.5%	0.0%	72.3%	56.6%	91.6%
Total	95.9%	89.5%	7.7%	0.0%	53.6%	46.4%	35.4%	5.5%	27.1%	0.0%	69.9%	47.8%	91.4%
Texas Tech University													
Upward Bound Program													
2002	85.7%	N/A	79.2%	N/A	41.7%	58.3%	45.8%	35.7%	N/A	N/A	87.5%	25.0%	91.7%
2003	100.0%	N/A	73.7%	N/A	47.4%	52.6%	63.2%	47.4%	N/A	N/A	84.2%	N/A	94.7%
2004	96.4%	N/A	77.8%	N/A	66.7%	33.3%	59.3%	46.4%	N/A	N/A	85.2%	37.0%	88.9%
Total	93.3%	0.0%	77.1%	0.0%	52.9%	47.1%	55.7%	42.7%	0.0%	0.0%	85.7%	22.9%	91.4%
Texas State Rural Talent Search Program													
2002	81.1%	13.3%	51.7%	35.0%	58.3%	41.7%	41.7%	16.2%	8.1%	9.5%	91.7%	13.3%	91.7%
2003	59.0%	10.9%	47.8%	39.1%	56.5%	43.5%	39.1%	14.1%	0.0%	0.0%	89.1%	28.3%	89.1%
2004	53.1%	15.4%	65.4%	17.3%	59.6%	40.4%	36.5%	13.3%	0.0%	0.0%	90.4%	57.7%	86.5%
Total	63.2%	13.3%	55.1%	30.4%	58.2%	41.8%	39.2%	14.4%	2.4%	2.8%	90.5%	32.3%	89.2%
University of North Texas													
Talent Search Program													
2002	68.6%	18.1%	29.1%	50.4%	62.2%	37.8%	24.4%	8.6%	4.9%	2.7%	76.4%	19.7%	66.9%
2003	70.5%	19.2%	21.0%	56.9%	67.1%	32.9%	25.1%	6.3%	3.0%	6.8%	80.2%	21.0%	89.8%
2004	61.3%	22.1%	25.7%	50.0%	67.6%	32.4%	34.6%	6.8%	4.5%	6.3%	82.4%	24.3%	82.4%
Total	66.8%	19.8%	24.9%	52.8%	65.8%	34.2%	27.9%	7.1%	4.0%	5.4%	79.8%	21.6%	80.7%
Fort Worth Independent School District													
HB 400 Program													
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	45.5%	36.3%	41.2%	21.6%	66.7%	33.3%	51.0%	11.6%	5.8%	3.1%	79.4%	56.9%	82.4%
2004	51.6%	36.9%	43.2%	17.0%	58.5%	41.5%	62.5%	16.4%	7.9%	4.4%	77.8%	52.8%	89.8%
Total	49.2%	36.7%	42.4%	18.7%	61.5%	38.5%	58.3%	14.5%	7.1%	3.9%	78.4%	54.3%	87.1%

DEMOGRAPHICS TABLE - GRADUATES OF SELECTED PROGRAMS FOUND IN COLLEGE ANYTIME AFTER HIGH SCHOOL GRADUATION (CONTINUED)[2]

Program/HS Grad Class	% of HS Grads Found	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged	% Economically Disadvantaged AND Hispanic Students	% Economically Disadvantaged AND Black Students	% Economically Disadvantaged AND White Students	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students w/ Plans to Go to College
UT Austin University Outreach Centers [1]													
2002	78.4%	9.0%	87.0%	2.5%	65.5%	34.5%	71.5%	51.4%	3.1%	0.0%	88.0%	44.5%	86.5%
2003	79.7%	23.9%	70.8%	3.3%	66.3%	33.7%	70.4%	42.6%	8.5%	0.0%	91.8%	40.7%	95.1%
2004	73.0%	24.2%	69.9%	4.6%	59.4%	40.6%	61.6%	36.0%	6.3%	1.7%	93.6%	47.5%	93.2%
Total	77.0%	19.5%	75.4%	3.5%	63.7%	36.3%	67.8%	42.9%	6.2%	0.6%	91.2%	44.1%	91.8%
UT Dallas SAT Prep Program													
2002	78.9%	73.2%	10.7%	N/A	66.1%	33.9%	64.3%	0.0%	28.2%	0.0%	87.5%	21.4%	98.2%
2003	71.1%	70.4%	N/A	N/A	70.4%	29.6%	55.6%	0.0%	26.3%	0.0%	96.3%	N/A	85.2%
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	76.1%	72.3%	7.2%	0.0%	67.5%	32.5%	61.4%	0.0%	27.5%	0.0%	90.4%	14.5%	94.0%
UT Pan American Concurrent Enrollment Program													
2002	95.3%	N/A	92.2%	7.0%	62.3%	37.7%	58.4%	53.7%	N/A	1.2%	99.5%	10.9%	95.3%
2003	94.4%	N/A	94.1%	3.3%	62.6%	37.4%	64.4%	57.6%	N/A	0.0%	99.7%	11.5%	97.4%
2004	93.9%	N/A	89.6%	6.9%	66.4%	33.6%	59.3%	51.7%	N/A	1.3%	100.0%	10.4%	89.8%
Total	94.5%	0.0%	91.9%	5.8%	63.9%	36.1%	60.6%	54.3%	0.0%	0.9%	99.8%	10.9%	94.0%
UT San Antonio Prefreshman Engineering Program													
2002	82.7%	9.5%	63.9%	22.0%	55.2%	44.8%	37.1%	26.1%	0.0%	2.4%	82.0%	23.3%	83.6%
2003	85.1%	7.0%	68.7%	19.0%	58.1%	41.9%	48.6%	33.7%	1.5%	2.1%	89.5%	20.8%	86.2%
2004	82.0%	7.2%	67.3%	19.3%	58.2%	41.8%	48.2%	27.7%	2.1%	3.2%	93.8%	34.8%	89.4%
Total	83.3%	7.9%	66.7%	20.1%	57.2%	42.8%	44.8%	29.2%	1.2%	2.6%	88.5%	26.3%	86.4%
Victoria College High School Outreach Program													
2002													
2003	69.4%	10.2%	39.4%	48.0%	66.1%	33.9%	18.1%	8.7%	0.0%	0.0%	78.7%	26.0%	88.2%
2004	65.4%	7.6%	34.5%	57.1%	71.4%	28.6%	23.5%	6.0%	3.3%	6.0%	87.4%	23.5%	89.9%
Total	67.4%	8.9%	37.0%	52.4%	68.7%	31.3%	20.7%	7.4%	1.6%	3.0%	82.9%	24.8%	89.0%
Financial Aid Officers for Selected Rio Grande Valley High Schools													
2002	69.8%	N/A	95.9%	N/A	50.9%	49.1%	73.3%	49.6%	N/A	0.5%	87.2%	48.7%	93.2%
2003	68.5%	N/A	95.7%	N/A	52.6%	47.4%	76.8%	50.1%	N/A	0.4%	92.6%	48.2%	94.0%
2004	66.8%	N/A	95.4%	N/A	53.3%	46.7%	76.2%	47.0%	N/A	0.6%	94.3%	48.0%	85.3%
Total	68.3%	N/A	95.6%	N/A	52.3%	47.7%	75.5%	48.8%	0.0%	0.5%	91.4%	48.3%	90.7%

1. Includes Austin, Dallas, and Rio Grande Valley Sites
2. College Data Available up to the Fall of Fiscal Year 2005

DEMOGRAPHICS TABLE - GRADUATES OF SELECTED PROGRAMS *NOT FOUND* IN COLLEGE ANYTIME AFTER HIGH SCHOOL GRADUATION[2]

Program/HS Grad Class	% of HS Grads Found	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students w/ Plans to Go to College
Austin Community College										
***College Connection* Program**										
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	38.4%	N/A	75.2%	23.9%	53.2%	46.8%	62.4%	70.6%	79.8%	41.3%
Total	38.4%	0.0%	75.2%	23.9%	53.2%	46.8%	62.4%	70.6%	79.8%	41.3%
Blinn College Dual Credit Program										
2002	5.6%	N/A	N/A	90.0%	50.0%	50.0%	N/A	85.0%	N/A	75.0%
2003	7.5%	N/A	N/A	74.2%	58.1%	41.9%	N/A	96.8%	N/A	80.6%
2004	6.5%	N/A	N/A	87.5%	43.8%	56.3%	15.6%	90.6%	N/A	68.8%
Total	6.6%	0.0%	0.0%	83.1%	50.6%	49.4%	6.0%	91.6%	0.0%	74.7%
Prairie View A&M University										
ACCESS Program										
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Texas Tech University										
Upward Bound Program										
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Texas State Rural Talent Search Program										
2002	18.9%	N/A	71.4%	N/A	71.4%	N/A	50.0%	57.1%	50.0%	50.0%
2003	41.0%	N/A	68.8%	18.8%	59.4%	40.6%	56.3%	62.5%	40.6%	46.9%
2004	46.9%	N/A	67.4%	26.1%	63.0%	37.0%	52.2%	60.9%	67.4%	50.0%
Total	36.8%	0.0%	68.5%	19.6%	63.0%	32.6%	53.3%	60.9%	55.4%	48.9%
University of North Texas										
Talent Search Program										
2002	31.4%	20.7%	32.8%	46.6%	60.3%	39.7%	25.9%	29.3%	34.5%	41.4%
2003	29.5%	17.1%	27.1%	52.9%	61.4%	38.6%	31.4%	35.7%	45.7%	62.9%
2004	38.7%	19.8%	26.7%	53.5%	60.5%	39.5%	34.9%	47.7%	59.3%	54.7%
Total	33.2%	19.2%	28.5%	51.4%	60.7%	39.3%	31.3%	38.8%	48.1%	53.7%
Fort Worth Independent School District										
HB 400 Program										
2002	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2003	54.5%	27.0%	65.6%	5.7%	66.4%	33.6%	55.7%	39.3%	73.8%	43.4%
2004	48.4%	35.8%	53.9%	9.1%	48.5%	51.5%	61.2%	61.2%	70.9%	66.7%
Total	50.8%	32.1%	58.9%	7.7%	56.1%	43.9%	58.9%	51.9%	72.1%	56.8%

DEMOGRAPHICS TABLE - GRADUATES OF SELECTED PROGRAMS *NOT FOUND* IN COLLEGE ANYTIME AFTER HIGH SCHOOL GRADUATION[2]

Program/HS Grad Class	% of HS Grads Found	% Black Students	% Hispanic Students	% White Students	% Female Students	% Male Students	% Economically Disadvantaged	% Students w/ Recommended/ Distinguished Diploma	% Students At-Risk	% Students w/ Plans to Go to College
UT Austin University Outreach Centers[1]										
2002	21.6%	16.4%	80.0%	N/A	67.3%	32.7%	56.4%	54.5%	56.4%	50.9%
2003	20.3%	21.0%	67.7%	9.7%	54.8%	45.2%	61.3%	62.9%	59.7%	79.0%
2004	27.0%	17.3%	75.3%	7.4%	55.6%	44.4%	66.7%	70.4%	70.4%	75.3%
Total	23.0%	18.2%	74.2%	6.1%	58.6%	41.4%	62.1%	63.6%	63.1%	69.7%
UT Dallas SAT Prep Program										
2002	21.1%	100.0%	N/A	N/A	33.3%	66.7%	53.3%	80.0%	N/A	93.3%
2003	28.9%	90.9%	N/A	N/A	N/A	63.6%	N/A	63.6%	54.5%	72.7%
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	23.9%	96.2%	0.0%	0.0%	19.2%	65.4%	30.8%	73.1%	23.1%	84.6%
UT Pan American Concurrent Enrollment Program										
2002	4.7%	N/A	73.7%	N/A	57.9%	42.1%	42.1%	100.0%	N/A	84.2%
2003	5.6%	N/A	87.0%	N/A	34.8%	65.2%	39.1%	100.0%	N/A	95.7%
2004	6.1%	N/A	89.3%	N/A	50.0%	50.0%	67.9%	100.0%	N/A	89.3%
Total	5.5%	0.0%	84.3%	0.0%	47.1%	52.9%	51.4%	100.0%	0.0%	90.0%
UT San Antonio Prefreshman Engineering Program										
2002	17.3%	6.3%	72.2%	12.7%	39.2%	60.8%	53.2%	72.2%	29.1%	68.4%
2003	14.9%	N/A	72.9%	20.0%	54.3%	45.7%	55.7%	72.9%	31.4%	61.4%
2004	18.0%	5.9%	78.8%	12.9%	62.4%	37.6%	52.9%	81.2%	41.2%	68.2%
Total	16.7%	4.3%	74.8%	15.0%	52.1%	47.9%	53.8%	75.6%	34.2%	66.2%
Victoria College High School Outreach Program										
2002										
2003	30.6%	8.9%	57.1%	32.1%	62.5%	37.5%	39.3%	57.1%	41.1%	64.3%
2004	34.6%	11.1%	52.4%	36.5%	63.5%	36.5%	39.7%	60.3%	47.6%	54.0%
Total	32.6%	10.1%	54.6%	34.5%	63.0%	37.0%	39.5%	58.8%	44.5%	58.8%
Financial Aid Officers for Selected Rio Grande Valley High Schools										
2002	30.2%	N/A	94.6%	N/A	46.4%	53.6%	81.5%	51.4%	73.6%	63.8%
2003	31.5%	N/A	98.0%	N/A	42.5%	57.5%	84.0%	57.3%	73.6%	62.9%
2004	33.2%	N/A	96.9%	N/A	44.2%	55.8%	86.8%	70.0%	77.0%	62.8%
Total	31.7%	N/A	96.6%	N/A	44.3%	55.7%	84.3%	60.2%	74.9%	63.2%

2. College Data Available up to the Fall of Fiscal Year 2005

APPENDIX D

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

SAMPLE PROGRAMS OUTCOMES TABLES

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

ENROLLMENT OUTCOMES FOR PROGRAM PARTICIPANTS AND REFERENCE GROUPS[2]
(CLASS 0F *2002* HIGH SCHOOL GRADUATES FOUND IN TEXAS PUBLIC AND PRIVATE 2 YR AND 4 YR INSTITUTIONS OF HIGHER EDUCATION)

NAME OF PROGRAM	Total Participants Found as HS Grads	Participant-Grads Found in College in the Fall Following HS Graduation	Percent of All Participant-Grads Found in College in the Fall Following HS Graduation[4]	Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Percent of All Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st or 2nd Year Following HS Graduation	Percent of All Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st Year or 2nd Year Following HS Graduation	Number of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year	Percent of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year
Austin Community College *College Connection* Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blinn College Dual Credit Program	355	318	89.6%	324	91.3%	332	93.5%	306	94.4%
Prairie View A&M University ACCESS Program	64	57	89.1%	59	92.2%	62	96.9%	51	86.4%
Texas Tech University Upward Bound Program	28	22	78.6%	24	85.7%	24	85.7%	18	75.0%
Texas State Rural Talent Search Program	74	47	63.5%	50	67.6%	57	77.0%	38	76.0%
University of North Texas Talent Search Program	185	95	51.4%	107	57.8%	125	67.6%	93	86.9%
Fort Worth Independent School District HB 400 Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
UT Austin University Outreach Centers[1]	255	164	64.3%	185	72.5%	196	76.9%	161	87.0%
UT Dallas SAT Prep Program	71	44	62.0%	47	66.2%	53	74.6%	37	78.7%
UT Pan American Concurrent Enrollment Program	406	364	89.7%	376	92.6%	383	94.3%	353	93.9%
UT San Antonio Prefreshman Engineering Program	456	321	70.4%	350	76.8%	367	80.5%	313	89.4%
Victoria College High School Outreach Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Financial Aid Officers for Selected Rio Grande Valley High Schools	1839	967	52.6%	1141	62.0%	1235	67.2%	907	79.5%
REFERENCE									
All Texas H S Graduates, '02	208953	109230	52.3%	123533	59.1%	133985	64.1%	101014	81.8%
Economically Disadvantaged	57809	22604	39.1%	27198	47.0%	30487	52.7%	20433	75.1%
Non Economically Disadvantaged	151144	86626	57.3%	96335	63.7%	103498	68.5%	80581	83.6%
All African American H S Graduates	27952	12072	43.2%	14477	51.8%	16160	57.8%	11023	76.1%
Economically Disadvantaged	10750	4082	38.0%	4975	46.3%	5622	52.3%	3600	72.4%
Non Economically Disadvantaged	17202	7990	46.4%	9502	55.2%	10538	61.3%	7423	78.1%
All Hispanic H S Graduates	66270	28268	42.7%	33643	50.8%	37404	56.4%	26371	78.4%
Economically Disadvantaged	36319	14415	39.7%	17525	48.3%	19628	54.0%	13371	76.3%
Non Economically Disadvantaged	29951	13853	46.3%	16118	53.8%	17776	59.4%	13000	80.7%
All White H S Graduates	107497	63578	59.1%	69713	64.9%	74513	69.3%	58358	83.7%
Economically Disadvantaged	9277	3074	33.1%	3587	38.7%	4073	43.9%	2446	68.2%
Non Economically Disadvantaged	98220	60504	61.6%	66126	67.3%	70440	71.7%	55912	84.6%
All Other H S Graduates	7234	5312	73.4%	5700	78.8%	5908	81.7%	5262	92.3%
Economically Disadvantaged	1463	1033	70.6%	1111	75.9%	1164	79.6%	1016	91.4%
Non Economically Disadvantaged	5771	4279	74.1%	4589	79.5%	4744	82.2%	4246	92.5%

1. Includes Austin, Dallas, and Rio Grande Valley Sites
2. Only students with valid SSNs were considered in these tables. Students with invalid SSNs, as listed in the TEA database, were not considered. Most of the SSNs that were deleted contained letters or fell short of the 9-digit standard.

ENROLLMENT OUTCOMES FOR PROGRAM PARTICIPANTS AND REFERENCE GROUPS[2]
(CLASS 0F *2003* HIGH SCHOOL GRADUATES FOUND IN TEXAS PUBLIC AND PRIVATE 2 YR AND 4 YR INSTITUTIONS OF HIGHER EDUCATION)

NAME OF PROGRAM	Total Participants Found as HS Grads	Participant-Grads Found in College in the Fall Following HS Graduation	Percent of All Participant-Grads Found in College in the Fall Following HS Graduation[4]	Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Percent of All Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st or 2nd Year Following HS Graduation	Percent of All Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st Year or 2nd Year Following HS Graduation	Number of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year	Percent of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year
Austin Community *College College* Connection Program	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blinn College Dual Credit Program	413	359	86.9%	369	89.3%	379	91.8%	343	93.0%
Prairie View A&M University ACCESS Program	67	63	94.0%	64	95.5%	64	95.5%	55	85.9%
Texas Tech University Upward Bound Program	19	19	100.0%	19	100.0%	19	100.0%	17	89.5%
Texas State Rural Talent Search Program	78	36	46.2%	43	55.1%	46	59.0%	32	74.4%
University of North Texas Talent Search Program	237	148	62.4%	157	66.2%	164	69.2%	116	73.9%
Fort Worth Independent School District HB 400 Program	224	70	31.3%	86	38.4%	101	45.1%	61	70.9%
UT Austin University Outreach Centers[1]	305	206	67.5%	224	73.4%	239	78.4%	184	82.1%
UT Dallas SAT Prep Program	38	22	57.9%	26	68.4%	27	71.1%	20	76.9%
UT Pan American Concurrent Enrollment Program	413	371	89.8%	382	92.5%	388	93.9%	357	93.5%
UT San Antonio Texas Prefreshman Engineering Program	469	345	73.6%	377	80.4%	396	84.4%	308	81.7%
Victoria College High School Outreach Program	183	109	59.6%	118	64.5%	126	68.9%	102	86.4%
Financial Aid Officers for Selected Rio Grande Valley High Schools	1924	1042	54.2%	1202	62.5%	1297	67.4%	929	77.3%
REFERENCE									
All Texas H S Graduates, '03	220507	115472	52.4%	130066	59.0%	141081	64.0%	105724	81.3%
Economically Disadvantaged	64976	26062	40.1%	30822	47.4%	34467	53.0%	22927	74.4%
Non Economically Disadvantaged	155531	89410	57.5%	99244	63.8%	106614	68.5%	82797	83.4%
All African American H S Graduates	29541	13239	44.8%	15629	52.9%	17413	58.9%	11754	75.2%
Economically Disadvantaged	12267	4768	38.9%	5760	47.0%	6498	53.0%	4054	70.4%
Non Economically Disadvantaged	17274	8471	49.0%	9869	57.1%	10915	63.2%	7700	78.0%
All Hispanic H S Graduates	71463	31142	43.6%	36564	51.2%	40558	56.8%	28504	78.0%
Economically Disadvantaged	40369	16490	40.8%	19625	48.6%	21938	54.3%	14809	75.5%
Non Economically Disadvantaged	31094	14652	47.1%	16939	54.5%	18620	59.9%	13695	80.8%
All White H S Graduates	112043	65679	58.6%	72035	64.3%	77034	68.8%	60078	83.4%
Economically Disadvantaged	10753	3665	34.1%	4198	39.0%	4732	44.0%	2926	69.7%
Non Economically Disadvantaged	101290	62014	61.2%	67837	67.0%	72302	71.4%	57152	84.2%
All Other H S Graduates	7460	5412	72.5%	5838	78.3%	6076	81.4%	5388	92.3%
Economically Disadvantaged	1587	1139	71.8%	1239	78.1%	1299	81.9%	1138	91.8%
Non Economically Disadvantaged	5873	4273	72.8%	4599	78.3%	4777	81.3%	4250	92.4%

1. Includes Austin, Dallas, and Rio Grande Valley Sites
2. Only students with valid SSNs were considered in these tables. Students with invalid SSNs, as listed in the TEA database, were not considered. Most of the SSNs that were deleted contained letters or fell short of the 9-digit standard.

ENROLLMENT OUTCOMES FOR PROGRAM PARTICIPANTS AND REFERENCE GROUPS[2]
(CLASS OF *2004* HIGH SCHOOL GRADUATES FOUND IN TEXAS PUBLIC AND PRIVATE 2 YR AND 4 YR INSTITUTIONS OF HIGHER EDUCATION)

NAME OF PROGRAM	Total Participants Found as HS Grads	Participant-Grads Found in College in the Fall Following HS Graduation	Percent of All Participant-Grads Found in College in the Fall Following HS Graduation[4]	Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Percent of All Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation
Austin Community College *College Connection* Program	284	148	52.1%	162	57.0%
Blinn College Dual Credit Program	489	442	90.4%	448	91.6%
Prairie View A&M University ACCESS Program	87	78	89.7%	82	94.3%
Texas Tech University Upward Bound Program	28	24	85.7%	27	96.4%
Texas State Rural Talent Search Program	98	48	49.0%	52	53.1%
University of North Texas Talent Search Program	222	119	53.6%	129	58.1%
Fort Worth Independent School District HB 400 Program	341	148	43.4%	167	49.0%
UT Austin University Outreach Centers[1]	300	193	64.3%	212	70.7%
UT Dallas SAT Prep Program	N/A	<5	N/A	<5	N/A
UT Pan American Concurrent Enrollment Program	460	424	92.2%	430	93.5%
UT San Antonio Prefreshman Engineering Program	473	353	74.6%	378	79.9%
Victoria College High School Outreach	182	110	60.4%	116	63.7%
Financial Aid Officers for Selected Rio Grande Valley High Schools	2057	1208	58.7%	1321	64.2%
REFERENCE					
All Texas H S Graduates, '04	226694	118885	52.4%	133710	59.0%
Economically Disadvantaged	70385	28859	41.0%	33872	48.1%
Non Economically Disadvantaged	156309	90026	57.6%	99838	63.9%
All African American H S Graduates	31197	14294	45.8%	16784	53.8%
Economically Disadvantaged	13506	5417	40.1%	6516	48.2%
Non Economically Disadvantaged	17691	8877	50.2%	10268	58.0%
All Hispanic H S Graduates	74930	33454	44.6%	38866	51.9%
Economically Disadvantaged	42958	18040	42.0%	21197	49.3%
Non Economically Disadvantaged	31972	15414	48.2%	17669	55.3%
All White H S Graduates	112751	65520	58.1%	71987	63.8%
Economically Disadvantaged	12163	4191	34.5%	4838	39.8%
Non Economically Disadvantaged	100588	61329	61.0%	67149	66.8%
All Other H S Graduates	7816	5617	71.9%	6073	77.7%
Economically Disadvantaged	1758	1211	68.9%	1321	75.1%
Non Economically Disadvantaged	6058	4406	72.7%	4752	78.4%

1. Includes Austin, Dallas, and Rio Grande Valley Sites

2. Only students with valid SSNs were considered in these tables. Students with invalid SSNs were not considered. Most of the SSNs that were deleted contained letters or fell short of the 9-digit standard.

ENROLLMENT OUTCOMES FOR PROGRAM PARTICIPANTS AND REFERENCE GROUPS[2]
(*ALL* (*TOTAL*) *PROGRAM* HIGH SCHOOL GRADUATES FOUND IN TEXAS PUBLIC AND PRIVATE 2 YR AND 4 YR INSTITUTIONS OF HIGHER EDUCATION)

NAME OF PROGRAM	Total Participants Found as HS Grads	Participant-Grads Found in College in the Fall Following HS Graduation	Percent of All Participant-Grads Found in College in the Fall Following HS Graduation[4]	Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Percent of All Participant-Grads Found in College Anytime in the 1st Year Following HS Graduation	Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st or 2nd Year Following HS Graduation	Percent of All Participant-Grads Found in College For the First Time Following HS Graduation Anytime in the 1st Year or 2nd Year Following HS Graduation	Number of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year	Percent of Participant Grads Found in College Anytime in the 1st Year Following HS Graduation Who Persisted to 2nd Year[5]
Austin Community College *College Connection* Program	284	148	52.1%	162	57.0%	162	57.0%	N/A	N/A
Blinn College Dual Credit Program	1257	1119	89.0%	1141	90.8%	1159	92.2%	649	93.7%
Prairie View A&M University ACCESS Program	218	198	90.8%	205	94.0%	208	95.4%	106	86.2%
Texas Tech University Upward Bound Program	75	65	86.7%	70	93.3%	70	93.3%	35	81.4%
Texas State Rural Talent Search Program	250	131	52.4%	145	58.0%	155	62.0%	70	75.3%
University of North Texas Talent Search Program	644	362	56.2%	385	59.8%	412	64.0%	204	77.3%
Fort Worth Independent School District HB 400 Program	565	218	38.6%	253	44.8%	268	47.4%	61	70.9%
UT Austin University Outreach Centers[1]	860	563	65.5%	621	72.2%	647	75.2%	345	84.4%
UT Dallas SAT Prep Program	109	66	60.6%	73	67.0%	80	73.4%	57	78.1%
UT Pan American Concurrent Enrollment Program	1279	1159	90.6%	1188	92.9%	1201	93.9%	710	93.7%
UT San Antonio Prefreshman Engineering Program	1398	1019	72.9%	1105	79.0%	1141	81.6%	621	85.4%
Victoria College High School Outreach Program	365	219	60.0%	234	64.1%	242	66.3%	102	86.4%
Financial Aid Officers for Selected Rio Grande Valley High Schools	5820	3217	55.3%	3664	63.0%	3853	66.2%	1836	78.4%
REFERENCE									
All Texas H S Graduates	656154	343587	52.4%	387309	59.0%	275066	61.6%	206738	81.5%
Economically Disadvantaged	193170	77525	40.1%	91892	47.6%	64954	51.5%	43360	74.7%
Non Economically Disadvantaged	462984	266062	57.5%	295417	63.8%	210112	65.7%	163378	83.5%
All African American H S Graduates	88690	39605	44.7%	46890	52.9%	33573	55.7%	22777	75.7%
Economically Disadvantaged	36523	14267	39.1%	17251	47.2%	12120	49.9%	7654	71.3%
Non Economically Disadvantaged	52167	25338	48.6%	29639	56.8%	21453	59.6%	15123	78.1%
All Hispanic H S Graduates	212663	92864	43.7%	109073	51.3%	77962	55.4%	54875	78.2%
Economically Disadvantaged	119646	48945	40.9%	58347	48.8%	41566	53.3%	28180	75.9%
Non Economically Disadvantaged	93017	43919	47.2%	50726	54.5%	36396	58.0%	26695	80.8%
All White H S Graduates	332291	194777	58.6%	213735	64.3%	151547	65.9%	118436	83.6%
Economically Disadvantaged	32193	10930	34.0%	12623	39.2%	8805	42.2%	5372	69.0%
Non Economically Disadvantaged	300098	183847	61.3%	201112	67.0%	142742	68.3%	113064	84.4%
All Other H S Graduates	22510	16341	72.6%	17611	78.2%	11984	79.0%	10650	92.3%
Economically Disadvantaged	4808	3383	70.4%	3671	76.4%	2463	79.2%	2154	91.7%
Non Economically Disadvantaged	17702	12958	73.2%	13940	78.7%	9521	78.9%	8496	92.5%

1. Includes Austin, Dallas, and Rio Grande Valley Sites
2. Only students with valid SSNs were considered in these tables. Students with invalid SSNs, as listed in the TEA database, were not considered. Most of the SSNs that were deleted contained letters or fell short of the 9-digit standard.

APPENDIX E

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

PROPENSITY SCORING/ COMPARISON GROUP ANALYSES

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

Table 1. Percentage of Program Graduates and Corresponding Comparison Group Graduates Found in College: the Fall Following High School Graduation, the First Year Following Graduation, and Those Enrolling in the First Year Who Persist to the Second Year, Totals for the Classes of 2002, 2003 and 2004

	TOTAL					
Program	N	Found In College in the Fall	Found In College in 1st Year.	Found to Persist to 2nd Year	Average TLI Reading Score	Average TLI Math Score
Austin Community College						
College Connection	***273***	***51.7%***	***56.8%***	***76.1%***	***84.2***	***81.8***
Comparison Group	273	55.0%	60.4%	71.1%	84.0	79.2
UT Austin						
University Outreach Centers	***803***	***64.4%****	***71.1%****	***81.8%****	***87.7****	***83.4****
Comparison Group	803	51.6%	56.8%	75.9%	81.5	76.4
Blinn College *Dual Credit*	***1,257***	***89.0%****	***90.8%****	***91.3%****	***93.2****	***87.2****
Comparison Group	1,257	65.6%	70.3%	81.8%	90.6	84.9
Edinburg CISD & Pharr-San Juan-Alamo ISD *Financial Aid Officers*	***5,508***	***53.4%****	***61.4%****	***75.9%****	***76.7***	***73.7***
Comparison Group	5,508	42.6%	50.3%	73.4%	75.6	72.6
Prairie View A&M University						
ACCESS	***216***	***90.7%****	***94.0%****	***86.7%****	***78.4***	***73.6***
Comparison Group	216	53.2%	63.9%	71.0%	77.2	73.1
University of North Texas						
Talent Search	***644***	***56.4%***	***61.2%***	***76.1%***	***82.3***	***77.9***
Comparison Group	644	55.3%	61.8%	78.1%	83.3	77.9
UT Dallas *SAT Prep*	***114***	***59.7%***	***65.8%***	***78.7%***	***79.5***	***73.8***
Comparison Group	114	61.4%	68.4%	76.9%	82.0	77.8
Texas Tech University						
Upward Bound	***76***	***86.8%****	***93.4%****	***77.5%***	***85.9***	***80.0***
Comparison Group	76	46.1%	52.6%	70.0%	77.5	74.1
UT San Antonio *Prefreshman Engineering Program (TexPREP)*	***1,398***	***72.8%****	***79.0%****	***82.4%***	***90.8****	***86.0****
Comparison Group	1,398	56.9%	63.5%	79.7%	85.9	80.7
TX State *Rural Talent Search*	***246***	***51.6%***	***57.3%***	***70.9%***	***86.2****	***82.2****
Comparison Group	246	43.9%	52.9%	79.2%	81.7	77.2
UT Pan American						
Concurrent Enrollment	***950***	***90.4%****	***92.5%****	***93.7%****	***93.3****	***87.7****
Comparison Group	950	63.8%	69.7%	81.6%	87.4	82.3
HB 400 Initiative	***566***	***38.5%***	***44.7%***	***74.3%***	***74.6***	***72.2***
Comparison Group	566	47.4%	54.1%	72.9%	79.4	74.1
Victoria College *HS Outreach*	***365***	***60.0%***	***64.1%***	***85.0%***	***84.9***	***80.0***
Comparison Group	365	54.8%	62.2%	79.3%	83.5	79.3

NOTES:

1. An asterisk, *, indicates that a positive arithmetic difference in the outcomes for the program graduates and the comparison group is significant in a statistical sense, with a probability of 5% or less that the result was not due to the P-16 intervention

2. The Ns (number of observations) represent *unduplicated* counts of the programs' graduates found in the Texas Higher Education Coordinating Board's database and, for several programs, therefore, may vary slightly from the number of graduates found and examined in other analyses. For the thirteen sample programs, the Study had identified a total, counting those enrolled in two or more programs, of 13,124. The total for the *unduplicated* number of program participants is 12,417.

3 The groups' average Texas Learning Index scores are also illustrated in this table.

APPENDIX F

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

STUDY METHODOLOGY

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

STUDY DESIGN

RESEARCH GOALS

The Study of Texas Higher Education-Sponsored P-16 Student-Centered Intervention Programs project team began its research with the goal of answering the following research questions:

How effective are various student-centered intervention programs at increasing college enrollment and graduation rates for Texas' economically disadvantaged, Hispanic, and African-American[1] students when participants are compared to similar students, in similar settings, who have not been enrolled in these programs?

Which services of these programs, alone or in combination, account for the greatest differences in higher education participation and success?

What are the most effective and efficient methods of delivering key services?

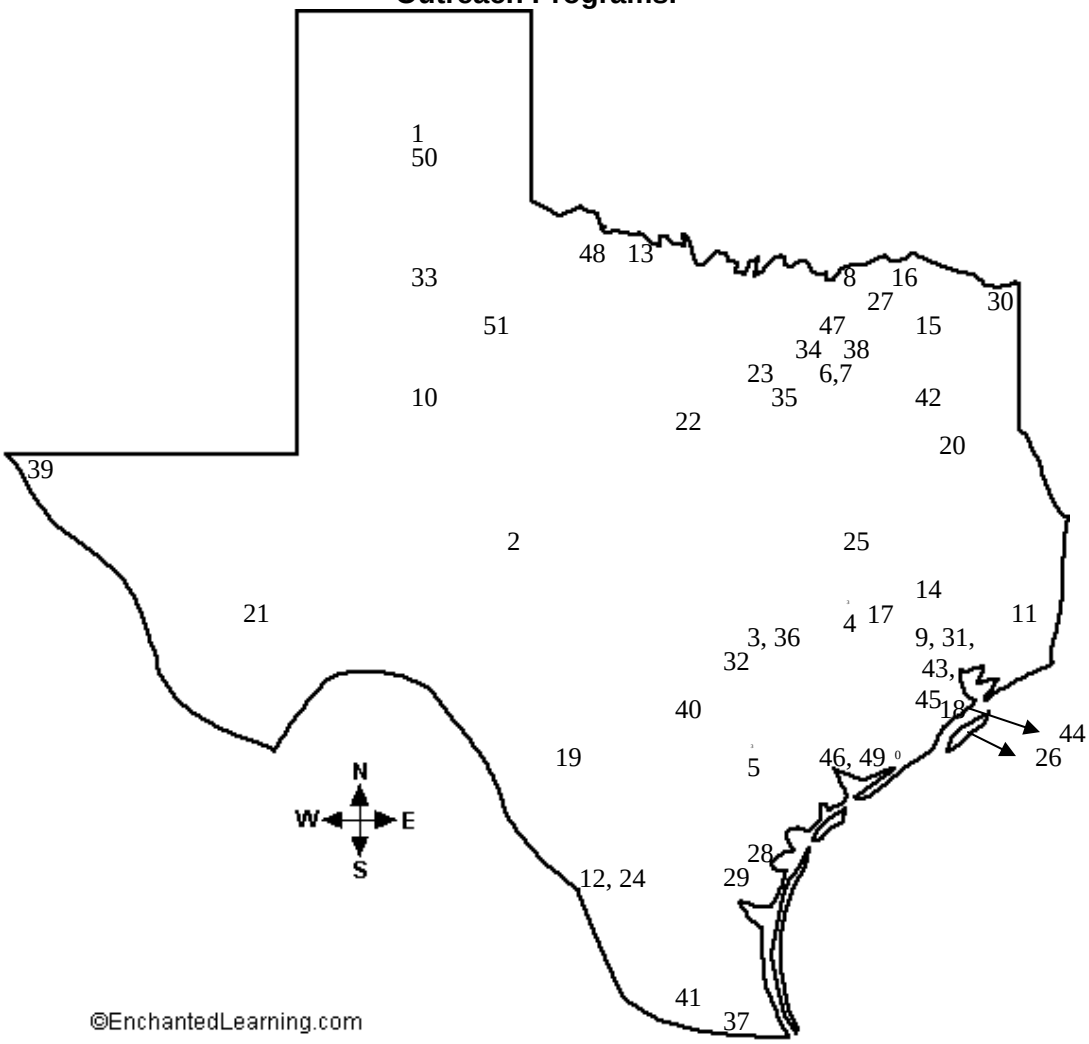
To answer these questions, the Study team made efforts to identify a representative sample of the various student centered intervention programs operating in Texas. To find these programs, Texas public institutions of higher education were queried in the form of an online survey. The remainder of the P-16 Study was shaped by the data obtained through this survey and the cooperation of the survey respondents (the administrators of the sample programs). The methods used to address the questions above, regarding the effectiveness of specific, key services are addressed in the main body of the report.

PROGRAM SELECTION

A survey designed to capture the nature of the college outreach activities in practice across Texas was sent to all public 2-year and 4-year colleges in the state. College outreach program coordinators at each institution were asked to provide a range of information concerning specific outreach efforts including: start date, target population, types of student services administered, database maintenance, funding, and expenditures. Fifty-one institutions from across the state reported 232 P-16 student-centered intervention programs.

[1] The terms Black and African American are used interchangeably within the body of this document.

Figure 1. Distribution of 51 Institutions Reporting P-16 Student Centered Outreach Programs.



1. Amarillo College
2. Angelo State University
3. Austin Community College
4. Blinn College
5. Coastal Bend College
6. Collin County CCD*
7. Dallas County CCD*
8. Grayson County College
9. Houston Community College System
10. Howard College
11. Lamar University
12. Laredo Community College
13. Midwestern State University
14. N. Harris Montgomery Comm. College
15. Northeast Texas Community College
16. Paris Junior College
17. Prairie View A & M University
18. San Jacinto College District
19. Southwest Texas Junior College
20. Stephen F. Austin State University
21. Sul Ross State University
22. Tarleton State University
23. Tarrant County College District
24. Texas A & M International University
25. Texas A & M University
26. Texas A&M University – Galveston
27. Texas A&M University – Commerce
28. Texas A&M University – Corpus Christi
29. Texas A&M University – Kingsville
30. Texas A&M University – Texarkana
31. Texas Southern University
32. Texas State University – San Marcos
33. Texas Tech University
34. Texas Woman's University
35. The University of Texas – Arlington
36. The University of Texas – Austin
37. The University of Texas – Brownsville
38. The University of Texas – Dallas
39. The University of Texas – El Paso
40. The University of Texas – San Antonio
41. The University of Texas Pan American
42. Trinity Valley Community College
43. University of Houston
44. University of Houston – Clear Lake
45. University of Houston – Downtown
46. University of Houston – Victoria
47. University of North Texas
48. Vernon College
49. Victoria College
50. West Texas A&M University
51. Western Texas College

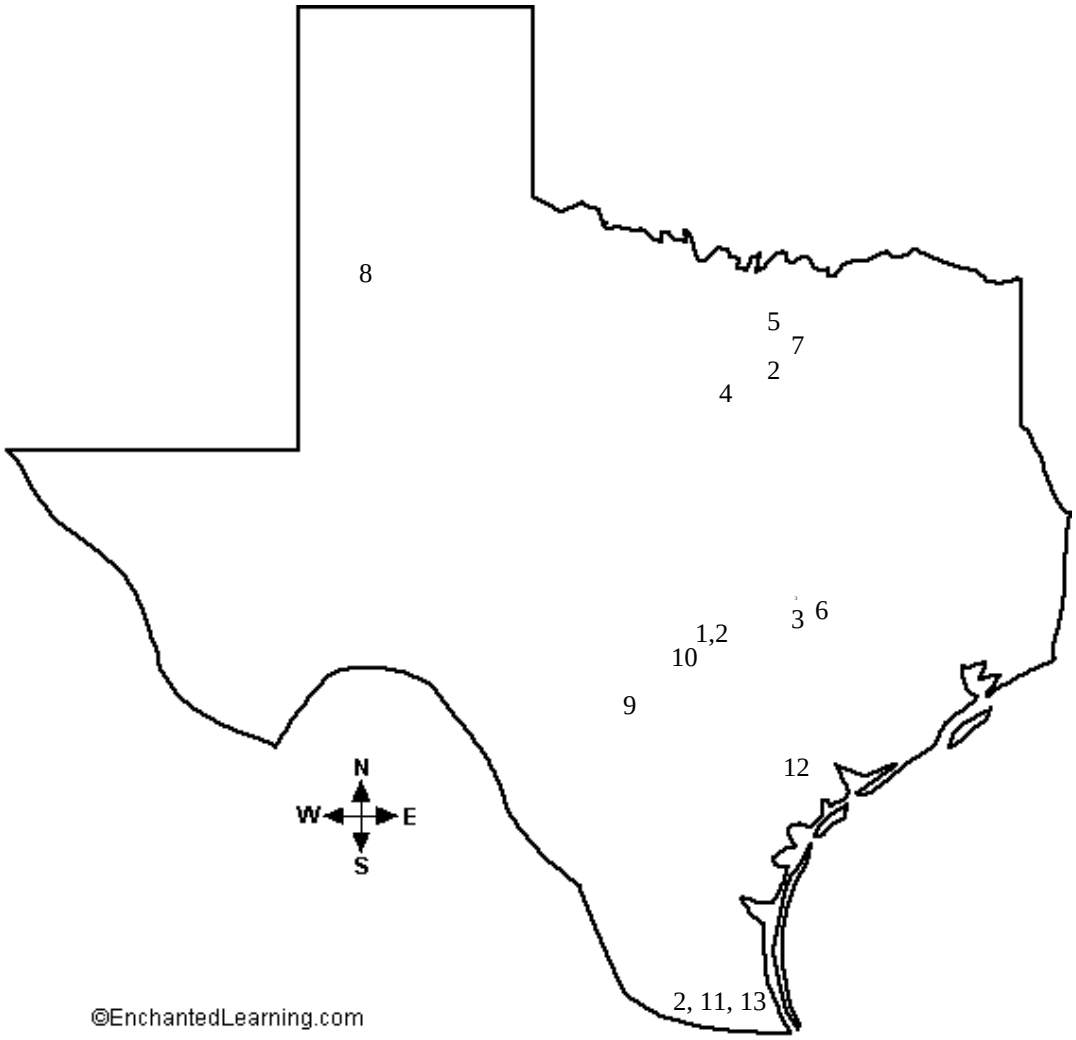
Fewer than half of the respondent programs were able (at the time of the survey) to provide information about the higher education outcomes of their participants. In fact, only the federally financed TRIO and related programs, such as Gear-Up, and a handful of others appear to maintain uniformly prescribed records of participants. However, these data are not routinely made available to the state's public and higher education authorities, the Texas Education Agency (TEA) and the Texas Higher Education Coordinating Board (THECB), and, at least in some cases, are not routinely shared with the administrations of the higher education institutions sponsoring the programs. (Certain programs, such as dual credit or concurrent enrollment programs that are offering courses for college credit are collecting and reporting participant activity as a part of their typical student reporting requirements.) Other intervention programs, however, collect student data at their own discretion based on their particular program and administrative needs. Overall, 61 percent of the programs responding to the initial survey reported collecting and maintaining the social security identifiers of the participants in their program.

Collecting data and using it to assess program activity levels and outcomes represented a unique challenge. The Family Educational Rights and Privacy Act (FERPA) (20 U.S.C. § 1232g; 34 CFR Part 99) governs the use of protected student records, including the students' identifying information such as social security numbers. The Act permits the release of protected information to authorized representatives of state educational authorities for evaluation purposes. Although each program under consideration for more in-depth study was informed of this Study's compliance with FERPA, TEA, and THECB standards of confidentiality, a few programs that were ideal candidates for this study could not or would not release student identifiers. Obtaining the necessary identifiers for the individual programs was, in several cases, extraordinarily time consuming and, for some, ultimately fruitless. Fortunately, many other programs were eager to participate in this study and readily cooperated. Many programs, without the necessary means of tracking participant success, voiced enthusiasm at the opportunity to find out about the success of their participants.

The key to the THECB database is a student's social security number.

Ultimately, 13 programs, which are referred to as the sample programs in this paper, were selected based on: 1) geographic location, 2) combination of student services, and 3) availability of student social security numbers for tracking. The geographic distribution of the selected programs is shown below. Programs with available social security numbers and a willingness to participate in the Study were compared to one another to find the set of sample programs with the most varied representation of the ten different services or combinations of services displayed by the initial survey respondents. The map below displays the geographic location of the selected programs. **These selected programs make up the most representative sample of the myriad combinations of student services provided around the state, given the limitations noted above**.

Figure 2. Distribution of 13 Sample P-16 Student Centered Outreach Programs.



1. College Connection
2. University Outreach*
3. Dual Credit
4. House Bill 400
5. Talent Search
6. ACCESS
7. SAT Prep
8. Upward Bound
9. TexPREP
10. Rural Talent Search
11. Concurrent Enrollment
12. Outreach
13. Financial Aid Advisor Program

* University Outreach includes the Austin, Dallas, and Rio Grande Valley Sites

Along with the social security numbers of participants provided by each of the sample programs, some of the selected programs provided an extended set of variables that listed and quantified the services provided to participants; the records that were available varied greatly in specificity and units of time. This was expected, but unfortunately it did not permit the direct comparison of service frequency for participants across programs.

While service frequency is not directly comparable across programs, measuring the varied degrees of success across programs embodying a certain combination of services allows comparison of the relative effectiveness of program types.

DATABASES AND VARIABLES

Through an agreement with the Texas Higher Education Coordinating Board (THECB), members of the P-16 Study team were granted access to certain databases through the use of a modified limited access computer known as the "jailed" personal computer (JPC). Only public high school and higher education records could be stored and accessed on the JPC; downloading or uploading of files or summary tables through the JPC required special permission and collaboration from a THECB staff member with JPC access. This arrangement with the THECB allowed program participants' social security numbers to be used as identifiers to locate the participants' public high school graduation records (PEIMS), the years of the participants' college participation, and highest degrees obtained (CBM files).

The files provided to the P-16 Study by the Texas Higher Education Coordinating Board consisted of Texas Education Agency (TEA) data originating through the TEA's Public Education Information Management System (PEIMS). The reporting of this data is required of all public school districts. Texas' public higher education data originated through the THECB's CBM reporting system. As the study progressed, a method was developed whereby a THECB staff member with access to CBM files from private institutions of higher education used computer programs written to combine CBM records from public and private colleges. In this way, a comprehensive view of Texas' higher educational outcomes was used in P-16 study calculations.

Additional student background data was obtained by the P-16 Study including information from TEA's Academic Excellence Indicator System (AEIS), Texas Learning Index scores from the Student Assessment Division of the TEA, and educational attainment characteristics of school district residents from the National Center for Education Statistics (NCES). The several major sets of data analyzed during the course of the study include the following:

- Texas Education Agency's Public Education Information Management System (PEIMS)[2]. These files were available through access to the JPC at the THECB and the records provided the basic demographic information for each program participant who graduated from a public high school. All variables from this database that were used in this study can be found in Table 5. PEIMS information on graduation cohorts extended back as far as fiscal year 1992 and continued through 2004. Since several of the sample programs started operations relatively recently, very few programs had substantial numbers of graduates before fiscal year 1998. Therefore, only PEIMS records from 1998 through 2004 were used in this study and, unless otherwise noted, only the valid social security numbers were used to calculate percentages throughout the comparative work of the Study. Students who graduated high school in fiscal years 1998 and 1999 would have had six years to complete a higher education degree as of years 2004 and 2005 respectively, allowing for the most recent degree outcomes to be measured. The number of PEIMS records available for matching and actually sampled, in each of the relevant fiscal years, is illustrated in Table 3.

- Texas Education Agency's Academic Excellence Indicator System (AEIS)[3]. These data are required of all Texas public school districts. Information from this database provided descriptors about the campus and district environment from which the program participant graduated. Campus-level descriptors include percent of African-American, Hispanic, or White students attending, percent of students in attendance who have limited English proficiency, and percent of students in attendance who are classified as migrant students or economically disadvantaged students. District-level variables provide a financial characterization of the district each student graduated from with variables including district-wide expenses and revenue per pupil, as well as the taxable property within each district. Table 6 in the Data Dictionary lists definitions for each variable.

[2] The PEIMS Data Standards may be found at:
http://www.tea.state.tx.us/peims/standards/0405/index.html.
[3] The Academic Excellence Indicator System may be found at:
http://www.tea.state.tx.us/perfreport/aeis/
Use search engine at this site to find variable of interest for the year of interest.

Table 1. Number of Unique Independent School Districts and Campuses Available From the AEIS Database within Each Fiscal Year

TEA Fiscal Year	Number of Districts	Number of Campuses
1998	1062	1442
1999	1104	1470
2000	1184	1514
2001	1200	1418
2002	1221	1430
2003	1225	1455
2004	1227	7813*

* This year contains elementary, middle, and high school campuses not included in previous years.

- Student Assessment Division of the TEA. (TLI Scores)[4]. These scores are derived from the scores for the reading and math TAAS tests taken by the subject population when they were in the 8th grade. The raw scores are converted to the Texas Learning Index and recorded for both reading and math. The Texas Learning Index, or TLI, is a score that describes how far a student's performance is above or below the passing standard. These variables are described in Table 7.

Table 2. Number of 8th Grade TLI Scores Available per Year from the Student Assessment Division of the TEA.

TEA Fiscal Year	Number of Valid SSNs
1994	243368
1995	247824
1996	254567
1997	258576
1998	259096
1999	261555
2000	274236

- National Center for Educational Statistics (NCES)[5]. The NCES measured the degree attainment of 1037 unique school districts for community members aged 25 and over in census year 2000. The variable used here is the percentage of the residents of the school district over the age of 25

[4] A "Guide to the Texas Learning Index (TLI)" may be found at: http://www.tea.state.tx.us/student.assessment/resources/guides/tli.html.
[5] Descriptions of the National Center for Education Statistics' "Educational Attainment" variables may be found by accessing the "Library" link at the following website: http://nces.ed.gov/surveys/sdds/downloadmain.asp.

who had not attained at least a bachelor's degree. Although these data were collected in census year 2000 and they were applied to all years encompassed by the study because they represent the most recent picture of district educational attainment. The variable used from this database is described in Table 8 in the Data Dictionary.

- Texas Higher Education Coordinating Board (THECB) CBM Student Enrollment Files (CBM001) and Graduation Files (CBM009)[6]. Every academic year, the THECB asks all 2-year and 4-year, public and private institutions of higher education, as well as technical and health-related colleges, to report and describe a number of characteristics of students enrolled during each semester of the academic year. In a separate file, each institution is asked to provide a few characteristics of students that completed a degree within the academic year. These files were available for academic years 1990 through fall 2006, but only files from years 1996 and later were used in the P-16 Study. It should also be noted that data from private institutions were only available for academic years 2002 through 2006. The information from these files that was of particular interest to this study included: 1) academic year of enrollment, 2) semester of enrollment, 3) academic year of graduation, and 4) type of degree attained. These variables are described in more detail in Table 9.

DATA STRENGTHS

- The data collected from the State's central education agencies' databases include important predictors of college enrollment, and completion to degree. Variables such as ethnicity, economic status, 8th grade academic performance (TLI Scores), type of high school diploma, and both campus and district level environmental descriptors are all noted in the literature as correlates of student success in higher education.

- Participant data from the sample programs, for academic years 1998 through 2004, represent almost 2 percent of all Texas public high school graduates during this time period. This is a large enough sample to produce precise estimates. The number of program participants found in the high school graduation records increased from academic years 1998 through 2004. At least 1.4 percent of all Texas high school graduates were accounted for in the sample set of program participants each year.

[6] The CBM Reporting and Procedures Manual(s) may be found under the *Reporting* section of the Data and Statistics Portal, found at: http://www.txhighereddata.org/ReportingManuals.cfm.

Table 3. Percent of All Texas Public High School Graduates Included In the Sample of Program Participants by Academic Year.

Academic Year	1998	1999	2000	2001	2002	2003	2004	Total
All Texas High School Graduates*	186261	190185	199254	200900	208953	220507	226694	1432754
Percent of Population Sampled	1.4%	1.6%	1.6%	1.7%	1.8%	2.0%	2.2%	1.8%

*Valid SSNs Only

- Postsecondary data include public and private college enrollment and graduation information. Students are tracked to all Texas higher educational institutions; therefore, this analysis provides a comprehensive look at key student outcomes including enrollment in college, persistence in college, and degree completion.

- The student enrollment, graduation, demographic and other characteristic data used are from Texas' two central education authorities; thus, these data are considered reliable and consistent. As opposed to the sample programs' self-reported data, these student data are collected from official, coordinated data reporting agencies and institutions. The credibility and reliability of these data add strength to the work of the Study.

DATA WEAKNESSES

- Sample program participant data do not represent the full geographic spectrum of programs in operation across the state. Areas such as Houston (aside from Prairie View A&M's participation in the study), far west Texas, and the Laredo area are not represented in this study; therefore, the contribution of environmental factors from these regions does not influence the recommendations proposed by this study.

  Some information that significantly influences student college–going and success outcomes was either not available or could be misinterpreted. Other studies indicate that such information as parental degree attainment, community type (i.e., urban, suburban, rural), and family income influence postsecondary education outcomes. One of the significant weaknesses of TEA's student data, for the purposes of these kinds of studies, is the lack of information about the educational attainment level of the students' parents. In the case of the type of community from which a high school student graduates, the data readily available through the TEA are ambiguous.

- Because there is no reporting system in Texas for students enrolled in these programs, the reference groups may contain students who also received services from programs not known to the Study. Although 13

programs were sampled throughout the state of Texas, 232 P-16 student centered programs were reported in the initial survey. It is not known how many or which students received services from other programs not in the sample; thus, such students may be included in the control groups. Such a possibility could distort some observations of differences identified through the analyses.

- The quantitative Sample program data, available to the Study, do not reflect the duration or frequencies of particular services that may have been delivered to the participants. Nor, in many cases, do they reflect when a particular student may have entered the program. **To attempt to answer the questions concerning the relative effectiveness of the various services offered by the programs, interview and survey data were utilized. These data are more fully discussed in the main body of the report.**

- The available data for several of the sample programs do not permit precise analyses of the potential impact on differences in expected outcomes due to possible 'selective recruitment or enrollment' practices on the part of the programs. Are the students who have been observed to enroll in the Dual Enrollment program, for example, predisposed to pursuing a college degree to a significantly greater degree than the control group? The propensity score method used in the Study attempts to correct for such a possibility.

METHODOLOGY FOR ORGANIZING THE STUDENT RECORDS

DATA SUMMARY TABLES

Upon receipt of sample program participant social security numbers, the P-16 Study deleted any numbers that did not meet the federal criterion of a valid social security number (SSN).[7] This was done to avoid potentially incongruent matches of program participants with invalid SSNs within the Texas Education Agency's PEIMS files and the Texas Higher Education Board's CBM files.[8]

After a list of potentially valid SSNs from each sample program was obtained, that list was matched with social security numbers within the Texas Higher Education Coordinating Board's resident PEIMS files. Table 4 shows the number of records from each sample program that matched with PEIMS records between the academic years of 1992 and 2004. As previously mentioned, the majority of these graduation records come from academic years 1998 through 2004.

The complete PEIMS graduation records of the six high schools (for graduates with valid social security numbers), included in the Financial Aid Officer program category, were used for the Study. Therefore, by definition they were all "Found as HS Grads", and are not listed in Table 4.

[7] In addition to other characteristics that distinguish valid SSNs from student IDs assigned by programs or institutions, federal social security numbers are all 9 digits long and are devoid of letters or special symbols. Please see the following website concerning the validity of social security numbers: http://en.wikipedia.org/wiki/Social_Security_Number

[8] Between 10,000 and 18,000 invalid SSNs are reported in the TEA's PEIMS files and about 15,000 invalid SSNs are reported each regular semester (i.e., spring and fall) within the THECB's CBM student enrollment files. It cannot be guaranteed that the same invalid SSN across sample program, TEA, and THECB files represents the same student.

Table 4. Matching Rates from Sample Program Participant Identifiers To TEA (PEIMS) Records.

Program	Number of Valid Sample Program SSNs Uploaded at THECB	Number of Program Participants Found as HS Grads (1992 – 2004)	Percent Found
College Connection	355	284	80%
University Outreach (Austin Site)	1518	797	53%
University Outreach (Dallas Site)	318	50	15%*
University Outreach (Rio Grande Valley)	2077	1325	64%
Dual Credit	2467	1568	64%
House Bill 400 Initiative	754	574	76%
Talent Search (TRIO)	3246	1516	47%
ACCESS	859	696	81%
SAT Prep	251	179	71%
Upward Bound	206	165	80%
TexPREP	6917	3176	46%
Rural Talent Search	1253	523	41%*
Concurrent Enrollment	2556	2342	92%
Outreach	437	370	85%
TOTAL	23404	13690	58%

*Note: Some programs provided records of projected year of participant high school graduation. These programs reported large numbers of students that either graduated in 2005, 2006 or are projected to graduate at a later date.

The PEIMS files provide student demographic and other characteristic data as well as the fiscal year of the program participant's high school graduation.

Once all of the student's individual characteristics and environmental factors had been assembled, the student was matched with his/her student enrollment records by SSN on the CBM student enrollment (CBM001) file for fiscal years 1996 through fall 2006[9]. Students were recorded only once for each outcome (i.e., fall first year following high school graduation, first year following high school graduation, and persistence to the 2nd year). The student was matched with the CBM graduation (CBM009) file by his/her social security number. The degree level associated with each student's highest level of degree attainment as of fall 2006 was then determined.

Each sample program and statewide demographic group was divided into cohorts based on fiscal year of high school graduation. That is, sample program participants were grouped and tracked according to the fiscal year of their high school graduation and, when considering characteristics of students across the state, the cohorts were similarly devised. When considering how to calculate the

[9] Program participants were matched with higher education enrollment records before the first cohort (fiscal year 1998) graduated from high school in order to find records of dual/concurrent enrollment for future study.

statewide rates of higher educational attainment, the question of whether or not to exclude invalid SSNs was raised.

The college-going data published on the THECB's website[10] reference all high school graduates in a given year as the baseline number. For this Study, the college-going rates were calculated using only students with valid SSNs. When matching program participant data to available TEA and THECB records, the largest number of matches that can be found is the total number of valid SSNs. Since the limiting number of program participant matches is determined by the number of valid SSNs, the baseline number of students that could possibly be found in college was the number of students with valid SSNs in the state. Thus, only valid SSNs were used throughout P-16 Study calculations.

Frequency counts of individual student characteristics and higher education outcomes within the graduation year cohorts were the focus of the summary tables in Appendix B, while environmental factors and student test scores were used in the propensity score level of analysis. As part of the FERPA agreement, the summary tables described above only displayed summary information for categories with cell counts greater than or equal to 5. This prompted the merging of the two ethnic/racial categories of American Indian or Alaskan Native due to the relatively small numbers of participants belonging to each group.

PRELIMINARY REFERENCE GROUPS

Two approaches to quantitatively analyze the comparative outcomes of the sample programs were incorporated into the study design. The first approach of the quantitative analyses compares the former program participants' outcomes with several statewide reference groups based on similar educational outcomes of Texas largest racial/ethnic groups and by status as either economically disadvantaged or not. The second approach of the quantitative analyses examines the former program participants' outcomes in contrast to comparison groups constructed to match the unique characteristics of the participants of the sample programs, and the schools they attended, using a statistical technique involving the calculation of propensity scores.[11]

Based on the method described in the Data Summary Tables section, statewide college-going and persistence rates were derived for non-economically disadvantaged and economically disadvantaged students within each of the four listed ethnic categories

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[10] These THECB data can be found at the following website: http://www.txhighereddata.org/Interactive/HSCollLink.cfm.

[11] Rubin, Donald B. "Estimating Causal Effects from Large Data Sets Using Propensity Scores". Annals of Internal Medicine. Volume 127 (8S) Supplement. 15 October 1997. http://www.stat.columbia.edu/-gelman/stuff_for_blog/propensity.html.

(See Appendix D, “Sample Programs Outcomes Tables”). All sample program participants were categorized by the same demographic groups, and counted (See Appendix C “Sample Programs Demographics Tables” (for each program FY 2002-2004)).

With the knowledge of the demographic composition of the participants of each sample program and the college-going rates for each comparable demographic group, statewide, a program-specific reference group, for each program, was constructed. With statewide college-going rates for each group serving as a baseline, the methods described below create a framework in which sample program success can be judged.

Each sample program’s unique reference group serves as a reflection of the program **based on the following assumptions**:

- Groups of students with matching economic status and ethnicity go to college and persist at the statewide rate for their respective demographic group.

- Because every student served by the program had to be accounted for, an “All Other” ethnic group was created for each program to categorize students whose ethnicity was unknown due to FERPA restrictions.[12] The “All Other” category may contain students from the African American, Hispanic, or White, as well as Asian or American Indian ethnic groups. Since the college-going and persistence rates for students within the statewide “All Other” category are comparatively high[13], the conservative estimate of program success dictated the use of the total statewide rate for this mixed group.

- All students served by the program fall into one of the 8 demographic classification groups.

With these assumptions in place the following steps where taken to create the program reference groups (See Figure 3 for Reference Group Formula):

[12] A count of students with each combination of ethnicity and economic status was derived for each of the sample programs and often the groups contained less than five students. In this case the data must be “masked” with a denotation of “<5”. With the additional knowledge of how many economically disadvantaged students each program served, we were able to add the unknown students to the appropriate “All Other” category.

[13] Please note that the statewide “All Other” category is a true complement of the 3 main ethnic groups (Hispanic, Black, and White). Since the statewide totals for each ethnic group are consistently >5, the “All Other” ethnic category does not serve as a “catch-all” group in the statewide scenario.

- All program demographic groups with counts <5 (denoted as “N/A” in Appendix C “Sample Programs Demographic Tables”) were assigned to the appropriate “All Other” economic category. Knowledge of the number of economically disadvantaged students served by each program allowed the assignment of students to the appropriate economic group classification. With each program graduate accounted for, the percentage of each group the program served was calculated.

- The percentages of each racial/ethnic and economic group served by the individual sample programs were multiplied by their respective statewide high school college entry rates for the fall following graduation. This process was carried out for rates from fiscal year 2002 to 2004. The percentage of students from each racial/ethnic and economic group who, by statewide standards, could be expected to have entered college were determined in this fashion (See Figure 3).

- The third step involved adding these 8 derived percentages to find the total reference group college-going rate for the fall following high school graduation.

- The preceding steps were repeated to find the reference group rates for college entry within the first year after high school graduation and persistence to the second year

Figure 3. Reference Group Formula

y = weighted college-going rate for a program specific reference group, (for fall following high school graduation);

$$y = (\alpha' \cdot \alpha x') + (\alpha'' \cdot \alpha x'') + (\beta' \cdot \beta x') + (\beta'' \cdot \beta x'') + (\phi' \cdot \phi x') + (\phi'' \cdot \phi x'') + (\varepsilon' \cdot \varepsilon x') + (\varepsilon'' \cdot \varepsilon x'').$$

Where…

$\alpha' =$ % White, economically disadvantaged (of the sample program)
$\alpha'' =$ % White, non-economically disadvantaged (of the sample program)

$\beta' =$ % Black, economically disadvantaged (of the sample program)
$\beta'' =$ % Black, non-economically disadvantaged (of the sample program)

$\phi' =$ % Hispanic, economically disadvantaged (of the sample program)
$\phi'' =$ % Hispanic, non-economically disadvantaged (of the sample program)

$\varepsilon' =$ % All Other, economically disadvantaged (of the sample program)
$\varepsilon'' =$ % All Other, non-economically disadvantaged (of the sample program)

$\alpha x' =$ % White, eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)
$\alpha x'' =$ % White, non-eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)

$\beta x' =$ % Black, eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)
$\beta x'' =$ % Black, non-eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)

$\phi x' =$ % Hispanic, eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)
$\phi x'' =$ % Hispanic, non-eco. dis. college-going rate (for fall following HS graduation, of statewide reference

$\varepsilon x' =$ % All Other, eco. dis. college-going rate (for fall following HS graduation, of statewide reference group)
$\varepsilon x'' =$ % All Other, non-eco. dis. college-going rate (for fall following HS graduation, of statewide reference

To answer the question as to how the actual program success rates compare to the reference group success rates, the actual program success rates were divided by their respective reference group success rates. To find the relative percent of actual program success to its reference group the Study team subtracted 1 (See Tables 20-22 in the Final Report primary document for differences). A positive percentage reflects the relative success of the program as compared to its comparative statewide reference group and a negative value indicates that the program was less successful than its reference group counterpart.

The statistical significance of these relative differences was measured using Pearson's chi-square test for the difference between two success probabilities. That is, a 2x2 table of outcomes for the frequency of successes (number of students who entered college or persisted) in each fiscal year for both the program and its reference group was created. The null hypothesis states that no difference between the success rates of the two groups exists (i.e., no association between program participation and success rate exists). The alternative hypothesis states that a difference in success rates exists between the two groups (i.e., an association between program participation and success rate exists). The SAS statistical software package was used to calculate the Pearson chi-square statistic. In each case a Pearson chi-square statistic with a significance level $\leq$ 0.05 led to the conclusion that the difference between the two groups was significant with the chance of a false positive less than or equal to 5 percent. In addition to comparing each program to its respective comparison group, a similar chi-square test compared each program's success frequency to the statewide total success frequency for that year.

PROPENSITY SCORING

Propensity scoring is a method of constructing a comparison group for analyzing the success of program participants within a quasi-experimental framework. In an ideal experiment, representative subjects would be assigned to a treatment group or control group at random. By randomizing an experiment, the chance of encountering overt or hidden bias[14] in the study design is minimized. Due to the nature of this study, the treatment group was not composed of sample program participants who were chosen at random and this posed a problem unique to the field of observational studies. Propensity scoring is one of the most developed methods for composing a control group that will allow for a valid statistical analysis in this situation. The use of this method simulates the benefits of random assignment by deliberately balancing the measured student variables to avoid overt bias. Statistical theory suggests that the reduction of overt bias similarly reduces the amount of hidden bias.[15]

The treated group has been defined as the participants of the sample programs who were high school graduates in fiscal years 2002 through 2004. Ultimately, control groups were available for each of the 13 sample programs separately. An initial stratification of sample program participants and non-participants was based on fiscal year of high school graduation. This ensured that Texas' fluctuating district and statewide education policies did not have an effect on the conclusions drawn in this analysis. With the cooperation of the THECB, the

[14] When the treatment and control group subjects differ in an observable characteristic that affects the outcome under scrutiny, then the study has an overt bias. If the treatment and control group differ due to an unobserved or unmeasured sample characteristic, then the study has hidden bias.

[15] Rosenbaum, P.R. *Observational Studies*. 2nd ed. New York, Inc.: Springer-Verlag, 2002, pp. 21-62.

analysis includes Texas' 2-year and 4-year public and private college enrollment and graduation records through fall 2006.

The observable variables collected for student characterization in this study range over the strongest factors influencing student success (i.e., college enrollment and persistence) as indicated by the Study's literature review. An initial quantitative assessment of the power of each measured variable to predict program participant college enrollment[16] was conducted. This test involved fitting a few generalized linear models (linear, probit, and logit), to each variable collected as an independent variable and student enrollment as the response variable. Each of the following variables was significant (at the 5 percent level of significance) in its ability to predict student enrollment:

Variables in the THECB database--

- Ethnicity
- Gender
- Economic Disadvantaged Status
- Limited English Proficiency
- Migrant Status
- At-Risk Status
- Indication of College Plans
- Enrollment in ESL Program
- Enrollment in Gifted-Talented Program
- Enrollment in Special Education Program

Variables Imported from the Texas Education Agency--

- TLI Reading Score
- TLI Math Score
- School District Educational Attainment Rates (i.e., Percent of ISD residents, age 25+, who had not earned a Bachelor's Degree or higher)

[16] College enrollment in this case was limited to enrollment within the first six years after the program participant's high school graduation.

- Percent of African American Students in Attendance at Campus of Graduation
- Percent of Hispanic Students in Attendance at Campus of Graduation
- Percent of White Students in Attendance at Campus of Graduation
- Percent of Economically Disadvantaged Students in Attendance at Campus of Graduation
- Percent of Migrant Students in Attendance at Campus of Graduation
- Percent of Limited English Proficiency Students in Attendance at Campus of Graduation
- Expenditures per Pupil at School District of Graduation

Of the above variables, the TLI scores and the campus and district characteristics were imported to the THECB data system from data files of the Texas Education Agency. However, because of missing values for various fractions of these imported data, when aligning them with the THECB student records, they were unsuitable for inclusion in the construction of the propensity score comparison groups. (TLI score averages for the study groups were subsequently compared to identify any significant group differences.)

The few variables that did not prove significant in predicting student college enrollment were: 1) Enrollment in a Title I program, 2) Enrollment in a Vocational Education Program, 3) Percent of Limited English Proficiency Students at Campus of Graduation, 4) Revenue per Pupil at School District of Graduation, and 5) Taxable Property within School District of Graduation. Although high school diploma type was a significant variable in predicting student success, it was also expected to be largely influenced by participation in the sample programs (making it a dependent variable). Therefore, it was not included as a covariate in calculating propensity scores.

The first step in this analysis involved estimating propensity scores for all students within each graduation year strata. The propensity score is, fundamentally, the probability of the student enrolling or persisting (this varied depending on the success outcome the Study team wished to analyze) in an institution of higher education based on the observed variables. Once this step was completed, the students in the treated group were separated from the larger group and each student in the treated group was matched with one student from the non-participant group based on the similarity of their propensity scores.

The matching process using propensity scores was accomplished using operations research (OR; also labeled optimization) software. This software accepts the necessary logical constraints to determine the overall optimal match of treated-group students with non-treated students. The end result of this matching is to identify for each treated student the non-treated student who is most similar on the variables that were used in the above-mentioned statistical model.

The second step was to estimate the effect of sample program participation on success in higher education using the appropriate statistical tests. That is, similar to a experimental group / control group comparison that is intended to determine whether the experimental treatment is more beneficial than the absence of the treatment, statistical tests were conducted to determine whether the P-16 treatment was more educationally beneficial than the absence of the P-16 treatment. The statistical tests included t-tests and multivariate analyses of variance.

(See Appendix E, “Propensity Scoring/Comparison Group Analyses”, for the outcomes associated with these analyses and Tables 24, 25, and 26 in the Final Report for an illustration of the relative differences in outcomes.)

DATA DICTIONARY

Table 5. Variables Analyzed In the P-16 Study from the Texas Education Agency's Public Education Information Management System (PEIMS)

Variable	Definition/Categories
SSN	Student social security number
Campus Number	Unique campus identification number registered with TEA. Please note that the unique school district number is the first 6 digits of the campus number.
Fiscal Year	Indicates the state fiscal year (state fiscal year begins September 1 and ends August 31)
Ethnicity	Identifies the student's ethnic origin 5 Categories: Black (not of Hispanic origin), Hispanic, White (not of Hispanic origin), Asian or Pacific Islander, and American Indian or Alaskan Native
Gender	Identifies the student's gender 2 Categories: Female, Male
Graduation Type Code	Indicates the type of plan under which the student graduated 3 Categories: Minimum, Recommended, Distinguished
College Entry Code	Indicates whether the graduated student plans (within one year from high school graduation) to enter college in a program leading to either an associate's or bachelor's degree 2 Categories: Yes, No
At Risk Code	Indicates whether a student is identified as at-risk of dropping out of school using only state-identified criteria 13 Unique Criterions: please visit the website listed below[17] for additional information 2 Categories: At-Risk, Not-At-Risk
Economic Disadvantage Code	Indicates the student's economic disadvantaged status dependent upon eligibility for National School Lunch and Child Nutrition Program or other assistance programs. 2 Categories: Economically Disadvantaged, Not Economically Disadvantaged
LEP Code	Indicates whether the student has been identified as limited English proficient 2 Categories: Limited English proficient, English proficient

[17] The PEIMS Data Standards may be found at: http://www.tea.state.tx.us/peims/standards/0405/index.html

TEA Special Programs:	
ESL Code	Indicates whether the student is participating in state-approved English as a Second Language (ESL) program. An ESL program is a program of intensive instruction in English. 2 Categories: Enrolled in an ESL program, Not Enrolled in an ESL Program
Vocational Education Code	Indicates whether the student is enrolled in a state-approved career and technology education course, is a participant in the district's career and technology coherent sequence of courses program, or is a participant in the district's tech prep program. 2 Categories: Not Enrolled in a Career and Technology Course/Program, Enrolled or is a Participant in the Course/Program
Gifted Code	Indicates whether a student is participating in a state-approved gifted and talented program 2 Categories: Enrolled in a Gifted and Talented Program, Not Enrolled
Title 1 Code	Indicates whether the student is participating in a program authorized under ESEA, Title I, Part A of the Improving Schools Act 2 Categories: Enrolled in a Title I Program, Not Enrolled
Migrant Code	Indicates whether the student is, or the student's parent, spouse, or guardian is a migratory worker, and who in the preceding 36 months, in order to obtain, or accompany such parent, spouse or guardian in order to obtain, temporary or seasonal employment in agricultural or fishing work: 1) has moved from one school district to another; or 2) resides in a school district of more than 15,000 sq. miles, and migrates a distance of 20 miles or more to a temporary residence to engage in fishing activity. 2 Categories: Migrant, Non-Migrant
Special Education Code	Indicates whether the student is participating in a special education program 2 Categories: Yes, No

Table 6. Variables Analyzed In the P-16 Study from the Texas Education Agency's Academic Excellence Indicator System (AEIS)

Variable	Definition
School Year	Indicates the school year (i.e., fiscal year) to which the district/campus data corresponds
District Data:	
District Number	Unique 6 digit Texas independent school district identification number
District Name	TEA Independent School District name
DPFRALLK	Revenue-total per pupil for the corresponding fiscal year (dollar amount)
DPFEOPFK	Total operating expenditures per pupil (dollar amount)
DPFVTOTK	Standardized local tax base value per pupil (dollar amount) Note: Data unavailable for fiscal years 1997 and 1998
Campus Data:	
Campus Number	Please see Table 1
Campus Name	TEA campus name
CPETLEPP	Percent of students enrolled on the campus who are classified as Limited English Proficient (LEP)
CPETECOP	Percent of students enrolled on the campus who are economically disadvantaged
CPEMALLP	Percent of students enrolled on the campus who are classified as mobile
CPETWHIP	Percent of students enrolled on the campus who are White
CPETBLAP	Percent of students enrolled on the campus who are African American
CPETHISP	Percent of students enrolled on the campus who are Hispanic

Table 7. Texas Learning Index (TLI) Variables Analyzed In the P-16 Study from the Student Assessment Division of the Tea

Variable	Definition
SSN	Student social security number
TLIRED	Indicates the Texas Learning Index score for the 8th grade reading test. Scores range from 11 to 99. A score of 70 is considered to have met the passing standard.
TLIMTH	Indicates the Texas Learning Index score for the 8th grade math test. Scores range from 8 to 92. A score of 70 is considered to have met the passing standard.

Table 8. Variables Analyzed By the P-16 Study from the National Center for Education Statistics (NCES) "Educational Attainment" Tables

Variable	Definition
District Name	TEA Independent School District name
Educational Attainment	Percent of district population 25 years old and over who had not obtained at least a bachelor's degree as of Census 2000

Table 9. Variables Analyzed By the P-16 Study from the Texas Higher Education Coordinating Board (THECB) CBM Reports

Variable	Definition
Fiscal Year	Indicates the state fiscal year in which the student was enrolled in (CBM 001) or graduated from (CBM 009) college
Student Identification Number	Student social security number (CBM 001 and 009)
CBM 001 (Student Report) Variables: Semester	Indicates the semester to which the student record pertains 4 Categories: Fall, Spring, Summer I, and Summer II
CBM 009 (Graduation Report) Variables: Degree Level	Indicates the level of degree conferred Categories: Certificate of Curriculum completion, Associate's Degree, Bachelor's Degree, Master's Degree, Special Professional Degree, and Doctoral Degree

APPENDIX G

STUDY OF TEXAS HIGHER EDUCATION-SPONSORED P-16 STUDENT-CENTERED INTERVENTION PROGRAMS

RECOMMENDED IDEAL BUDGET, JOB DESCRIPTIONS, AND BENEFIT/COST ANALYSIS

The Institute for Demographic and Socioeconomic Research
The University of Texas at San Antonio

RECOMMENDED IDEAL BUDGET AND JOB DESCRIPTIONS

The Study's recommendations contemplate the creation of a College Counselor's office in each participating high school, complemented by the addition of a Texas Higher Education Outreach Coordinator employed by participating institutions of higher education. Together these personnel would coordinate the development of the high school's *Postsecondary Readiness, Participation, and Success Plan (the Plan)*.

Tables 1 and 2 illustrate the costs associated with implementing this model. In developing and pricing such a proposal, certain assumptions about the size of the schools and other services that may or may not be available are made and these are explained in notes to the respective tables. The significant personnel expenses are associated the functions of the College Counselor and any assistants and with the associated Higher Education Outreach Coordinators.

To better understand the budget needs, however, the following sample job descriptions first illustrate the scope of the duties of these professionals.

Sample Job Description

COLLEGE COUNSELOR

JOB TITLE: College Counselor

REPORTS TO: High School Principal **WAGE/HOUR STATUS:** Exempt

DEPT./CAMPUS: High School **SALARY:** $45,000 - $55,000

PRIMARY PURPOSE: Coordinate the school's/district's efforts to encourage and enable more of the schools' students: 1) to establish clear career and postsecondary education goals and 2) to prepare for and obtain the postsecondary education necessary to achieve those goals.

QUALIFICATIONS:

Education/Certification:
Bachelor's degree required
Master's degree preferred

Special Knowledge/Skills/Experience:
Experience working with diverse groups of students
Commitment to facilitating higher education opportunities for all students
Strong organizational, communications, and interpersonal skills
Experience with career counseling, college admissions and recruitment

MAJOR RESPONSIBILITES AND DUTIES:

1. Coordinate the establishment of the school's goals and objectives with respect to the participation and success of its graduates in postsecondary education. Coordinate the development and implementation of the school's *Postsecondary Readiness, Participation, and Success Plan (the Plan)* to achieve these goals and objectives.
2. Coordinate the operation of the College and Career guidance and counseling resources at the secondary campuses
3. Coordinate the development of postsecondary education plans for students in grades 7-12 to include: participation in a college preparatory curriculum appropriate for each grade level and participation in career and college exploration and awareness activities and alternatives.
4. Provide all students, their parents, educators, and the community at large early information about the benefits of higher education and the

necessary steps to prepare academically and financially for postsecondary education.

5. Coordinate the development of a comprehensive college and career readiness curriculum for P-16.
6. Coordinate the preparation for and the taking of PLAN/PSAT/ACT/SAT tests, including arranging for waivers and financial assistance to offset test fees.
7. Coordinate activities to assist students and parents in completing and submitting the Free Application for Federal Student Aid (FAFSA) and in obtaining college scholarships, grants, and other financial assistance.
8. Coordinate activities to assist students in completing and submitting college admission applications.
9. Coordinate campus visits by colleges and universities.
10. Coordinate student visits to colleges and universities.
11. Coordinate college nights, parent nights, financial aid informational sessions, career fairs, etc.
12. Conduct training seminars and workshops about financial aid to keep campus staff and members of the community abreast of the latest information, opportunities, and processes.
13. Coordinate the preparation of resumes and/or essays for college applications. Train campus staff in the writing of effective letters of recommendation for students.
14. Assist the guidance counselors implement/conduct the school's program to enable students to obtain college credit while still in high school through dual credit/concurrent enrollment opportunities and Advanced Placement course taking.
15. Work closely with college recruitment/admission personnel to assure timely submittal of student applications for admission and financial aid.
16. Stay abreast of recent developments in the prerequisites for certain fields of postsecondary study along with changes in testing requirements for college admission.
17. Identify and coordinate the use of intervention programs, activities, and other resources available from other public entities, the private sector, and from individuals that support the attainment of the school's *Plan.* Advocate activities with those intervention programs that provide intervention services to students in pre-high school grades in schools that "feed" the high school, as well as those that support the high school's *Plan*.
18. Attend professional development and continuing education seminars/forums in the field of college enrollment/recruitment strategies as appropriate.

Sample Job Description

HIGHER EDUCATION OUTREACH COUNSELOR

JOB TITLE: Outreach Counselor

REPORTS TO: (college outreach director) **WAGE/HOUR STATUS:**

DEPT./CAMPUS: **SALARY:** $32,500 - $37,500

PRIMARY PURPOSE: Represent the (college/university) as Outreach Counselor, located in _____, Texas. Coordinate outreach activities for the partnering high school and middle schools through work with the high school's College Counselor. Assist middle and high school students, in concert with the participating institutions' *Postsecondary Readiness, Participation, and Success Plan,* prepare for and enroll in college upon graduation from high school.

QUALIFICATIONS:

Education/Certification:
Bachelor's degree required
Master's degree preferred

Special Knowledge/Skills/Experience:

- Commitment to facilitating higher education opportunities for all students
- Strong organizational, communications, and interpersonal skills
- Experience in educational issues facing potential first-generation college students, economically disadvantaged, and other middle and high school students from groups historically underrepresented in Texas higher education
- Experience in managing projects and employees
- Academic counseling and guidance experience, teaching, or administrative experience in upper elementary or secondary education preferred
- Experience working with diverse groups of students

MAJOR RESPONSIBILITES AND DUTIES:

1. Participate in the development of the *Postsecondary Readiness, Participation, and Success Plan* of the partnering middle and high schools.

2. Plan program development, instructional implementation, staffing, training, and monitor performance reporting in accordance with the Plan. Assist in the development of student workbooks that serve as student guidebooks for preparation for college.
3. Coordinate and manage the operation of the Outreach Center.
4. Oversee day-to-day operations of the Center; supervision of center staff to include providing leadership and training; monitor performance of individuals and the office as a whole.
5. Provide instruction and counseling to middle and high school students, with a concentration on 7th through 9th graders, in academic and scholastic matters, in a teaching and advising role. Assist the high school's College Counselor with services for 10th through 12th graders as necessary. Such work shall be done in coordination with the staff and faculty of the partnering middle and high schools.
6. Work with parents and the community. Act as an information resource for the community.

Table 1, which follows, illustrates the suggested budget for the high school's College Counselor's office.

Table 1. Ideal Budget to Implement the *Plan* for a Typical Texas High School's College Counselor

Objects of Expense	Number	Estimated Cost per Year
College Counselor	1	$ 50,000
Assistant, Postsecondary Initiatives (Career Specialist)	1	$ 32,500
Benefits (@ 18%), est.		$ 14,850
Desktop Computers	15	$ 15,000
Copier	1	$ 5,400
Typewriters	5	$ 1,000
Laser Network Printer	1	$ 1,500
Scanner	1	$ 150
Server and Internet Access	1	$ 3,250
Telephones	1 + 1 cell	$ 1,980
FAX	1	$ 150
ACT/SAT Prep Software	12 ea.	$ 1,800
Career Exploration Software	1 license	$ 1,000
Furniture		$ 3,000
Travel For Staff For Students' Campus Visits	 1500	 $ 3,000 $ 12,680
Food		$ 1,000 yearly (for student refreshments during evening and weekend sessions)
Tutors		Free or paid by school district (college students to assist HS students in the preparation of essays, resume writing and tutoring).
Other Operating Expenses		$ 23,600 (includes funds for other expenses such as incidental supplies and those necessary to help prepare for and defray student costs associated with the taking of pre-college and college entrance exams, and seasonal expenses involving outside personnel and/or equipment costs associated with students' preparation of the FAFSA and college applications.)
TOTAL	N/A	**$171,860**

Note: Schools with Career Centers already budgeted and operating would not necessarily have to replicate all the suggested items above.

Table 2 illustrates the suggested budget for the Higher Education Outreach Coordinator.

Table 2. Ideal Budget to Implement the *Plan* for a Texas Higher Education Outreach Coordinator

Objects of Expense	Number	Est. Cost per Year
Outreach Coordinator	1	$ 35,000
Assistant Outreach Coordinator *(optional, depending on the size and number of schools)*	1	$ 32,500
Benefits (@ 30%), est.		$ 20,250
Laptop Computer (+ accessories)	2	$ 4,000
Laser Printer	2	$ 900
Scanner	2	$ 300
Cell phone & Service	2	$ 3,000
Travel		
For Counselors		$ 7,500
For Students' Campus Visits	1000	$ 8,453
For College Camp	100	$ 11,300
Instructional & Program Expenses		$ 13,625
Program Support		$ 20,650
TOTAL		**$157,478**

The total annual cost of the suggested budgets for a high school's College Counselor and the higher education institution's Texas Higher Education Outreach Coordinator would be $329,338. Given a typical high school with 2000 students in grades 9 through 12, that is 'fed' by two middle schools with 250 students each in the 8th grade, the assumed total number of students who may be served by the model *Plan* is 2500 students. In such a case the per student cost of this model *Plan* would amount to $132.[1] The ideal budget could be adjusted to accommodate different class sizes as well as configurations of middle schools that feed a high school.

[1] Certain incremental, or marginal, costs associated with the Ideal Budget will vary with the size of the school(s), the number of campuses, and other resources that may already be in place in the schools. Because some of the principal costs are relatively fixed, unit costs may be expected to increase somewhat, the smaller the target population. For example, based on the objective of involving each participant in one or more Plan activities at least every 4-6 weeks, providing for the college campus visits, career counseling and the other services recommended in the Plan, a Plan involving 1,250 students with only one middle school, in lieu of 2,500 students, might be anticipated to cost as much as $198 per participant. On the other hand, a smaller school system may not need an Assistant Outreach Coordinator, thereby reducing total costs. Additionally, if there is already a "college counselor" and/or a career center counselor in place, the marginal unit costs would be reduced accordingly. These unit costs are still much lower than those of the typical TRIO and other comprehensive, early intervention outreach programs that have been examined. Similarly, if existing school counselor positions assumed some of the duties that the proposal contemplates for the Outreach Coordinators, these positions and attendant costs could be reduced. These unit costs are still much lower than those of the typical TRIO and other comprehensive, early intervention outreach programs that have been examined. These Ideal Budget estimates do not include the costs that would be associated with expanded use of Dual Credit/Concurrent Enrollment programs.

BENEFITS OF A MODEL POSTSECONDARY READINESS, PARTICIPATION, AND SUCCESS PLAN

Benefits of higher education accrue to both the individuals involved and society, generally. Individuals benefit from greater employability and earnings through which they and their families enjoy a richer quality of life. Society also reaps social and economic benefits. On the whole, college educated individuals tend to engage more in volunteer activities and in other aspects of community and civic life, while higher levels of education add significant additional value to the total economy.

Because more highly educated workers add extraordinary value to the total economy, the monetary benefits of implementing the suggested model *Plan* are potentially very significant. To gauge the benefit/cost ratio, in this case, involves first calculating the net benefit to the Texas economy of 1) a graduate of a model *Plan* program who attends a Texas college or university, but does not obtain a degree, and 2) a graduate of the program who attends college and does earn a bachelor's degree. It is fortunate for such an undertaking that the Texas Comptroller of Public Accounts has done a great deal of work in this area.[2]

- Assumptions About the Benefits
    - Based on the Comptroller of Public Accounts' assessment of the economic impact of a college education:
        - a high school graduate who obtains "some college", but not necessarily a degree, will contribute, over a lifetime, approximately $114,000 more to the Texas economy, in 2006 dollars, than they might otherwise contribute.
        - similarly, one who earns a bachelor's degree will contribute approximately $373,000 more to the Texas economy than they might otherwise contribute.

[2] Texas Comptroller of Public Accounts. The Impact of the State Higher Education System on the Texas Economy - Special Report. February 2005. http://www.window.state.tx.us/specialrpt/highered05/highered05.pdf.
The analysis in this Study borrows from the Comptroller's estimates of the net present value of the earnings differences attributable to a college education and their impact on the Texas economy. Accounted for in the Comptroller's work are the costs, both actual and opportunity costs, to the students who choose to go to college rather than immediately enter the workforce. The actual costs include such items as tuition and fees that are, in turn, used to finance operations of the colleges and universities; the opportunity costs reflect lost earnings from delayed entry into the workforce. The earnings differences in the Comptroller's report are for FY2003; they are adjusted here to reflect the change in the Consumer Price Index, to approximate a value for 2006---per telephone conversation on June 26, 2006 with Dr. Tamara Plaut, Revenue Analysis Division, Texas Comptroller of Public Accounts.

- In addition to the direct benefits, other advantages would also accrue to the state because of these efforts. Better prepared and focused students would result in students taking fewer remedial courses while in college and more students obtaining the certificates and degrees they seek. Other potential benefits include financial savings for the student who completes college-level courses while in high school or receives college credit for AP courses, and the completion of more college degrees in less time due to better preparation and pre-college completion of some necessary coursework. This analysis does not attempt to calculate the dollar value of such additional benefits.

- Assumptions About the Costs

  - This benefit/cost illustration assumes a hypothetical high school with more than 41 per cent of its students classified as economically disadvantaged. In 2005, an average of only 43 per cent of the graduates of these Texas high schools were found enrolled in a Texas college in the fall following high school graduation. In contrast to this experience, 54 per cent of the graduates of schools with proportionately fewer economically disadvantaged students were found enrolled in college.[3]

  - **For the purposes of this illustration only**, this analysis assumes a conservative, intermediate *student-outcome* objective of closing the gap between the 'found in Texas colleges' rate of a typical high school with the higher proportion of economically disadvantaged students and the average rate of a high school with a lower incidence of economically disadvantaged students, thereby increasing the college-going rate of the former group of schools from 43 per cent to 54 per cent. Such an intermediate objective would amount to an *increase* in the rate for such a high school of 11 per cent of the graduating class. Other student outcomes based on the findings of this Study could be assumed, but this example purposely focuses on a conservative assumption in order to not overstate the benefit/cost ratio.

[3] Statistics derived by P-16 Study from the Texas Higher Education Coordinating Board's Data and Statistics Website http://www.txhighereddata.org/Interactive/HSCollLink.cfm.

- While the per-student cost of the program is $132 per year, or $660 over the five years of the intervention, the cost per net new student enrolled in higher education would always be some greater amount, unless in an extremely unlikely case no previous graduates had gone to college and 100 per cent of the new program's graduates did (go to college). The cost of a net student enrolled would mean that the *effective* cost in this hypothetical case would amount to the total model *Plan* cost being attributed to the 11 percent of graduates whose college-going behavior it is assumed would have been changed by the program. Therefore, the $660 per-student cost to implement the model *Plan*, over the entire five-year period a student could participate, would be adjusted to be a "net per new student enrolled" cost of $6,000 (i.e., $660 ÷ .11).

- The estimated general revenue cost, per full time student-equivalent (FTSE) of attending a public 2-year institution of higher education or a university in Texas is estimated to be an average of $2,858 per year, in 2006 dollars.[4] Therefore, the general revenue fund cost, to public colleges and universities, of a student obtaining 'some college' is estimated to approximate $5,716. The general revenue fund cost, to public colleges and universities, of a student obtaining a bachelor's degree, is estimated to approximate $12,575.

[4] 2006 Estimated Costs per FTSE provided by Texas Higher Education Coordinating Board, June 30, 2006. The estimates are based on the formula-related appropriation items used to finance the public institutions of higher education. For this analysis, this author uses the assumption that the costs of obtaining "Some College" are equivalent to two (2.0) years of the weighted general revenue costs of attending a typical public Texas university or 2-year institution of higher education and that the costs of earning a bachelor's degree are 4.4 times the equivalent annual costs. Data available through the National Center for Education Statistics (NCES) indicate that the average number of hours completed by bachelor's degree recipients is 132.2 which, for the purposes of this analysis, would be the equivalent of 4.4 FTSEs. See NCES' Digest of Education Statistics, 2005. Table 307. http://nces.ed.gov/programs/digest/d05/tables/dt05_307.asp

- Summary and Conclusions of the Benefit/Cost Analysis

Table 3. Dollar Costs and Benefits of the Recommended Model *Plan*, Per Hypothetical Additional Student Enrolled in Higher Education, 2006 Dollars[5]

	For A HS Graduate Who Obtains "Some College"	For A HS Graduate Who Obtains A Bachelor's Degree
Costs		
1. Of the Model *Plan*----------	$6,000*	$6,000*
2. Potential Costs to Institutions and Agencies of Higher Ed a. G.R.Operating Costs (avg.) of Colleges and Universities b. G.R.Costs (avg.) of Student Grants-in-Aid---------- c. G.R.Construction Costs-----	 $5,716 ** Not Quantified ***	 $12,575 ** Not Quantified ***
Total Costs	$11,716	$18,575
Benefits		
1. Value Added to the Texas Economy---------- 2. Savings Due to Less Remediation, More Timely Graduation, etc.---------- 3. Value Added to the Texas Economy Through Subsequent Generations-----	$114,000 Not quantified Not quantified	$373,000 Not quantified Not quantified
Total Benefits	$114,000	$373,000
Benefits Less Costs	**$102,284**	**$354,425**

Notes:

* The costs of the model *Plan* for this benefit/cost analysis are the effective costs of enrolling one more high school graduate in college <u>for this example only</u>. Alternatively, if it were assumed that the additional college-going rate produced as a result of the intervention was 19%, as is the difference in some outcomes attributable to the University Outreach Program, the "net per student enrolled" cost would be $3,474 in lieu of $6,000.

** The direct costs, including tuition and fees, books, housing, etc., of a student attending college are accounted for in the Comptroller's estimates of the net present value added to the Texas economy. To include an estimate of grant-in-aid as a cost in this analysis would amount to double-counting the costs underlying such grants. In practice, however, it would be expected that most of these students would qualify and receive some financial assistance. For example, the average TEXAS grant in 2005 was $2,789. In this benefit/cost example, if 65.2% of the targeted high school graduates (the proportion of economically disadvantaged graduates in the target high schools) were eligible for the grant, the average *effective* grant per additional student enrolled would be: $2,789 x .652 = $1,818 per year enrolled.

[5] This analysis of costs focuses on estimates of potential costs to Texas general revenue funds and, in the case of the public schools, the Available and Foundation School Funds.

*** Estimates of the general revenue costs of additional educational and general space that may be required at colleges and universities, that may be attributable to one additional undergraduate student, would vary based on assumptions regarding the method of financing (construction financed by student tuition and fees would already be accounted for in the calculation of net present value of increased earnings of the additional students). Because facilities have a useful life extending beyond the first additional enrolled student, estimates would also vary by assumptions of the number of additional students enrolled over the useful life of the additional facilities. Other considerations regarding efficient use of space could also produce varying estimates.

- The benefits to the Texas economy, derived from a direct recipient of these services, **in this example**, range from $9.73 per $1 of costs to $20.08 for every $1 of additional intervention and higher educational costs (i.e., $114,000 ÷ $11,716 and $373,000 ÷ $18,575).

- If the recipient is a 'first-generation' college student, the benefits to Texas extend beyond the direct recipient of these services. Given the high degree of correlation between the educational attainment of a student's parents and the subsequent attainment of the student, the benefits of the proposed interventions would be expected to extend to the next and subsequent generations, further multiplying an already favorable cost/benefit ratio.

- Furthermore, as the model *Plan* results in enrollment gains affecting more than the hypothetical 11 percent of the high school class used in this example, the benefits-to-costs ratio increases accordingly.

The costs to Texas of not successfully addressing these disparities in educational attainment are profound. They include not only the advantages described in the preceding paragraph that would not be realized, but the dollar costs to the Texas economy of forgone earnings. Based on the benefit/cost example in this report, the cost to the Texas economy of not remedying the college-going disparity that exists between the graduates of high schools with greater numbers of economically disadvantaged students and schools with students from more prosperous families could exceed $1 billion a year. The loss to the Texas economy would occur every year the disparity persists.[6]

[6] If the college-going rate of graduates of these two groups of high schools had been equal in 2005, 10,698 more students would have enrolled in Texas institutions of higher education. As the benefit/cost analysis in this report illustrates, the net economic impact on the Texas economy of a student who obtains "Some College" is estimated to be $102,284. 10,698 x $102,284 = $1,094 million.

ESTIMATING THE ECONOMIC IMPACT OF GAINING A HIGHER EDUCATION

The estimates used in the preceding analyses are derived from previous work done by the Texas Comptroller of Public Accounts.[7] The Comptroller's Office has published several estimates of the economic impact of higher education on the Texas economy. One facet of these studies has involved estimating the impact of the increased productivity of college-educated Texans.

The Comptroller has estimated that the net present value of future earnings gains attributable to someone with "some college" was $57,030 in 2003. The same value for a person who earned a bachelor's degree was determined to be $185,900. The Comptroller estimates that the impact on the Texas economy attributable to these earnings gains is 1.8182 times the earnings gains. (earnings represent 55 percent of Texas gross state product). Therefore, earnings gains of $57,030 x 1.8182 = $103,692 in economic impact to Texas. Similarly, gains of $185,900 x 1.8182 = $338,003, in 2003 dollars, are added by a person who earns a bachelor's degree. There are other estimates, not reflected here, for those who earn master's, doctoral, and professional degrees.

To adjust these estimates to reflect 2006 values, the Comptroller's Office suggested using the change in the CPI, in this case from May 2003 to May 2006. During this time the CPI has increased by 10.35 percent. Therefore the estimated 2006 value added to the Texas economy by a student with "some college" is 1.1035 x $103,692 = $114,424. Similarly, $338,003 x 1.1035 = $372,986 is added in value by one who earns a bachelor's degree.

These values are not discounted by an employment rate because it is assumed that, as the data support, employment rates for college graduates as opposed to those with less education are generally greater the higher the level of education.

[7] Texas Comptroller of Public Accounts. The Impact of the State Higher Education System on the Texas Economy - Special Report. February 2005. http://www.window.state.tx.us/specialrpt/highered05/highered05.pdf.