REVENUE STREAMS OF HISPANIC SERVING COMMUNITY COLLEGES IN TEXAS

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This study examined the extent and sources of primary revenue for Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas. The study also examined differences between and among primary revenue streams for these institutions. The public community colleges were identified as Hispanic-, African-American-, and Caucasian-serving based upon the percentage of enrollments for each ethnic classification.

A comparative model was developed for the primary revenue streams of in-district student tuition, out-of-district student tuition differentials, out-of-state student tuition differentials, ad valorem property tax revenue per in-district contact hour, and state appropriations. Statistical Packages for the Social Sciences (SPSS) was utilized to conduct multiple-factor analysis of variance (ANOVA) on the data set to examine differences between and among the several variables. Post hoc tests were performed where necessary.

Difference was identified in in-district student tuition. Post hoc analysis demonstrated that difference existed between Hispanic-serving and African-American-serving community colleges. No difference was identified in the remaining primary revenue streams.

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CHAPTER 1

INTRODUCTION

In 1997, Texas Demographer, Steve H. Murdock, issued an official report, The Texas Challenge. This report predicted that Texas will be much poorer in 2030 unless it implements major new strategies to cope with its great influx of low-income immigrants. He challenged the state to close existing gaps in adult educational attainment by increasing the number of degrees awarded among the diverse ethnic groups comprising the state's population. Murdock specifically issued a clarion call for Texas to assume responsibility for meeting the needs of its fast-growing Hispanic population.

Murdock's report was widely read by policymakers across the state and led to a comprehensive review of the existing master plan for higher education in Texas. After numerous public hearings and the establishment of a business advisory panel to provide input into the master plan, the Texas Higher Education Coordinating Board (THECB) issued its own report, Closing the Gaps by 2015. This new master plan for higher education established goals in four areas: participation, success, excellence, and research. Participation and success continue to be the most relevant goals for community college leaders (Closing the Gaps, 2001).

In the 2002 fall semester, Texas enrolled 1,105,600 students in its institutions of higher education. Of these, 88.3% were enrolled in publicly supported institutions, 456,209 (41.3%) were enrolled in public universities and 519,922 (47.0%) were enrolled

in one of Texas' publicly supported community colleges, Lamar state colleges or in the Texas State Technical College System (Texas Higher Education Facts, 2003).

The state's fifty community college districts serve 247 counties in Texas. Ninety-five percent (95%) of the state's population reside within the boundaries of a community college service area. The average community college service area has a population of 408,736 residents; 277,810 of these residents, or 68%, live in taxing districts. Service area populations range from 2,277,353 in the Dallas County Community College District to 50,470 at Clarendon Community College in Clarendon, Texas (Texas Public Community and Technical Colleges 2002 Statewide Factbook, 2003).

The average age of all community college students in Texas is 25. Female students comprise 54% of the enrollment at community colleges. Seventy-three percent (73%) of the freshman and sophomore students in Texas public higher education enroll in community colleges. Seventy-eight percent (78%) of minority freshman and sophomore students in Texas attend public institutions of higher education and public community colleges. Sixty-three percent (63%) of the 461,236 students enrolled in fall 2001 and attended community colleges in Texas enroll on a part-time basis. Twenty-nine percent (29%) of the state's community college students receive need-based financial aid from federal and state programs while 72% of Texas community college students are employed while attending college (Texas Higher Education Facts, 2003).

Texas public community colleges are generally viewed as "open door" institutions. As such, they reflect the ethnic diversity of the state, lagging behind only in the percentage of Hispanic students enrolled.

Table 1

Comparison of Student Ethnicity

Ethnicity	Community College	University Enrollment	Texas
Hispanic	26%	20%	32%
African-American	12%	10%	11%
Caucasian	53%	57%	52%
Other	7%	13%	13%

Source: CTC Enrollment – Calculated for the 2000-01 Academic Year from the Texas Public Community and Technical College 2002 Statewide Factbook, University Enrollment Fall 2001 Texas Public University's Data and Performance Report, Texas Population Demographics - Bureau of Census

Closing the Gaps

In the state's master plan, Closing the Gaps by 2015, the THECB suggested that half a million additional students need to enroll in Texas institutions of higher education to bring participation levels to predicted national averages. The THECB also suggested that the number of persons receiving baccalaureate degrees needs to increase from 57,000 to 104,000 to place Texas at the national average (Closing the Gaps, 2001).

Closing the Gaps does not aim at putting Texas among the national leaders in adult educational attainment, only to bring the state to the national average. It is also important to note at the outset that, with 89% of all students enrolled in the public sector of higher education, this sector must provide leadership if the goals are to be realized. The situation appears to many practitioners to be not unlike that facing the state in 1963, when then-Governor John Connally suggested higher education as the key to the future of Texas. In his original charge to the THECB, Governor Connally stated:

> And always keep in mind that yours is the opportunity to implement an education policy that will give Texas young men and women a quality of education superior to any in the nation – and we must never be satisfied with less (Connally, 1965).

Participation

The Master plan identifies participation as one of four major objectives. In Closing the Gaps by 2015: 2003 Progress Report published by THECB, success rates are targeted for Hispanic, black and white enrollment. One-half of the state's increase in Hispanic enrollment was reported by 11 of its public institutions of higher education. Seven community colleges are included in these figures: South Texas Community College, El Paso Community College, North Harris Montgomery Community College, Alamo Community College, Tarrant County Community College, Del Mar College, and Austin Community College. The Progress Report clearly indicates that participation for 2003 Hispanic enrollment is 14.4% below the plan's statewide target. (Texas Higher Education Facts, 2003)

Identification of the community colleges with the highest percentage enrollments of Hispanics, African-Americans and Caucasians requires additional calculation from base data gleaned from the Texas Public Community and Technical Colleges 2002 Statewide Factbook. These institutions appear in Table 2. This table utilizes a simple methodology to divide the number of Hispanic, African-American and Caucasian students attending the various community college districts by the total enrollment of the system. The result produces a percentage of enrollment for each of the designated ethnic classifications. The percentages are then rank ordered from highest to lowest. Rankings of the top ten districts are listed by percentage of enrollment in Table 2.

Table 2

Top Ten Texas Community Colleges by Percentage of Enrollment FY 2000-01

Hispanic		African-American		Caucasian	
College	Percent	College	Percent	College	Percent
Laredo	95.4%	Central Texas	31.8%	Grayson	89.2%
South Texas	93.7%	Houston	24.9%	Hill	84.3%
El Paso	74.8%	Galveston	21.7%	North Central	82.2 %
Southwest Texas	74.6%	Panola	21.3%	Paris	81.6%
Texas Southmost	62.6%	Kilgore	20.2%	Northeast Texas	80.7%
Coastal Bend	57.5%	Dallas County	19.2%	Clarendon	78.3%
Alamo	51.9%	Navarro	18.4%	Blinn	78.3%
Del Mar	50.1%	Tyler	18.3%	Texarkana	78.2%
Howard County	44.5%	Texarkana	17.4%	Vernon	77.7%
Odessa	40.9%	College of Mainland	17.4%	Amarillo	76.7%

Source: The top ten community colleges by percentage of enrollment for Hispanic, African-American and Caucasian serving institutions were identified from information obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook. All subsequent percentages were calculated from data obtained from the same source.

Statement of the Problem

The study proposes to investigate and compare primary revenue streams of Hispanic-serving, Caucasian-serving and African-American-serving public community colleges in Texas.

Rationale

The state of Texas has devoted much time and effort to the development of its higher education master plan, Closing the Gaps by 2015; however, little research has been conducted to determine the viability and equity of the primary revenue streams for

the state's publicly supported community colleges to attain the goals. The study examines the goals of participation and success as related to the issue of financial support.

In a fall 2003 review of more than 300 dissertations, no dissertations were identified that address the financial viability of Hispanic-serving community colleges, the extent of their funding, and whether differences exist between and among their revenue streams and those of predominantly Caucasian-serving community colleges.

A search of the literature reveals extensive efforts by the state of Texas to establish objectives and assessment criteria to evaluate success. Failure to meet the established goals can lead to a growing unskilled and under-educated population unable to meet emerging demands of a technologically based workplace. The state of Texas has also estimated the possible economic results of this failure. No literature evaluating the financial ability of the state's community colleges to meet these increased demands has been identified.

Financial barriers, limitations and funding differences among the 50 Texas community districts can cause the state's master plan to fail.

Purposes of the Study

The four purposes of this study were to:

1) Determine the sources and extent of primary revenue for Hispanic-serving public community colleges in Texas;

2) Determine the sources and extent of primary revenue for African-American-serving public community colleges in Texas;

3) Determine the sources and extent of primary revenue for Caucasian-serving public community colleges in Texas; and

4) Determine if differences exists between and among primary revenue streams of Hispanic- , African-American-, and Caucasian-serving public community colleges in Texas.

Research Questions

1) What are the sources and extent of primary revenue for Hispanic-serving public community colleges in Texas?

2) What are the sources and extent of primary revenue for African-American-serving public community colleges in Texas?

3) What are the sources and extent of primary revenue for Caucasian-serving public community colleges in Texas?

4) Do differences exist between primary revenue streams of Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas?

Significance of the Study

A study of the primary revenue streams of Hispanic-serving public community colleges in Texas is important because failure to provide adequate educational opportunities to any segment of the state's diverse population harms the state's economic viability. In light of the burgeoning population growth of the Hispanic population in Texas, public community colleges must be provided adequate resources to ensure success among Hispanics in meeting participation goals.

The following is stated in Closing the Gaps by 2015:

> Reaching the goal will also require increasing participation from every population group, but especially Hispanics and Blacks. The White college enrollment rate of 5 percent continues to exceed the 3.7 percent participation rate for Hispanics and the 4.6 percent rate for Blacks. Hispanic and Black Texans will increase from 42 percent to 52% of the state's population by 2015. Unless Texas significantly increases the enrollment rates of all of its people, demographic shifts will steadily reduce the number of students enrolling in higher education from the current 5 to 4.6 percent by 2015. (Closing the Gaps, 2001)

Valid, steady, equitable and adequate revenue streams are essential to the success of Hispanic-serving community colleges as they strive to enhance access and participation for the Hispanic population of Texas.

The 50 public community college districts in Texas are dependent upon three primary sources of revenue: student tuition, ad valorem property taxes and state appropriations. These three primary funding streams, though not the only sources of revenue, compose a three-tiered foundation essential to the health and viability of the Texas public community college system. A comprehensive examination of this foundation is readily available but only in the most general sense. Comparative analysis between and among these three revenue streams is seriously lacking. This study proposes to develop a comparative revenue model which facilitates an examination of the primary revenue streams for Hispanic, African-American and Caucasian-serving Texas community colleges.

The Texas Community College Revenue Model

The revenue model illustrates the relationship among the various components of primary funding sources as they relate to the tuition structure employed by Texas community colleges. The revenue model is presented in Figure 1. Major components of the revenue model are in-district sources, out-of-district sources and out-of-state sources. These components represent the associated primary revenue streams for in-district, out-of-district and out-of-state students. The model for in-district revenues is founded upon the assumption that Texas community colleges were originally intended to stand upon three primary sources of funding: student tuition, ad valorem property taxes and state appropriations (Priest, 2003).

Figure 1. Texas revenue structure integrated with ad valorem property taxes and state appropriations.

In-District Revenue Sources	Out-of-District Revenue Sources	Out-of-State Revenue Sources
State Appropriations	State Appropriations	Out-of-State Tuition Differential & State Appropriations
Ad Valorem Property Tax Revenue	Out-of-District Tuition Differential	Out-of-District Tuition Differential
In-District Tuition Revenue	In-District Tuition Revenue	In-District Tuition Revenue

As previously noted, the Texas community college system was designed to serve students residing within the taxing district. Revenue in this scenario originates from the three sources of in-district student tuition, ad valorem property taxes and state appropriations. As indicated in Figure 1, the inclusion of out-of-district residents of Texas, residents not residing within the taxing district, requires modification to this revenue structure. State appropriations are provided to reimburse the instructional costs for both in-district and out-of-district students. However, ad valorem property taxes are not assessed outside of the taxing district, meaning that tuition revenues are utilized as an offset with an out-of-district tuition differential in addition to the traditional in-district tuition revenue.

The revenue structure for out-of-state students is very similar to that for out-of-district students. Since out-of-state students do not reside within the taxing district, they are assessed the basic in-district tuition augmented with the out-of-district tuition differential. Though state appropriations are provided to reimburse community colleges for the instructional costs generated by serving out-of-state students, all fifty Texas community college districts assess an out-of-state tuition differential.

Definition of Terms

1) Ad valorem property tax – a tax assessed local property owners to finance physical plant maintenance and operation (M&O) for a specific governmental entity (Barron, 2003).

2) African-American-serving – in the top ten by percentage of African-American students enrolled.

3) Caucasian-serving – in the top ten by percentage of Caucasian students enrolled.

4) Contact hour – one clock hour of instruction contact with one student which constitutes the basis of the fiscal allocation of state appropriations for Texas community colleges (Barron, 2003).

5) Funding formula – a formula allocating state revenue to the fifty public community college districts based upon analysis of historical direct instructional costs (Barron, 2003).

6) Hispanic-serving – in the top ten by percentage of Hispanic students enrolled.

7) Primary revenue streams – the three revenue sources of state appropriations, ad valorem property taxes and student tuition and fees.

8) Service area – the portion of the state in which a specific community college is responsible for the delivery of educational services (Barron, 2003).

9) State appropriations – revenue appropriated each community college district to fund the cost associated with the delivery of instructional services (Barron, 2003).

10) Student tuition and fees – the cost of education born by the student (Barron, 2003).

11) Taxing district – the portion of a community college's service area in which ad valorem property taxes are assessed to offset the cost of plant maintenance and operation (Barron, 2003).

Limitations

1) Information contained within the Texas Public Community and Technical Colleges 2002 Statewide Factbook is based on data obtained for the 2000-01 academic year. More current data are not available for all three primary revenue streams.

2) Tuition and fee amounts obtained from the Texas Association of Community Colleges (TACC) are self-reported. As such, recorded amounts are subject to error. Information only exists for the years from 1997-98 to 2003-04.

Delimitations

1) The study examined only the top ten publicly supported Texas community college districts as determined by percentage of ethnic enrollment for Hispanic-, African-American-, and Caucasian-serving community colleges.

2) Tuition and ad valorem tax levies were determined based on information provided by the TACC. (Appendices A and B).

3) Percentage of ethnic enrollment and contact hours generated were determined based on information contained within the Texas Public Community and Technical Colleges 2002 Statewide Factbook. (Appendices C and D).

4) The study examined data for the 2000-01 academic year only.

CHAPTER 2

LITERATURE REVIEW

Higher education in Texas, as in most of the nation, is faced with fallout from the current economic downturn. Texas public institutions of higher education have experienced significant decline in funding at the same time they face increased demand for services. Texas public community colleges have been particularly challenged as they struggle with record enrollments and unprecedented demographic transition. This has placed extraordinary burdens upon local funding sources such as ad valorem tax revenue and student tuition. In an interview in 2004, Rey Garcia, Executive Director of the Texas Association for Community Colleges (TACC), continued to voice strong concern that public community colleges in Texas have been placed in the untenable position of meeting the needs of the populace without adequate support from the state. Garcia articulates the concern of the state's public community colleges as follows.

> The 78th Texas Legislature, facing record funding shortfalls, enacted cuts across the state budget and community colleges were not exempt and were cut by about four percent. Coupling the cut with record enrollment growth the effect of the cut was a reduction of about 16 percent per student contact hour – setting contact hour funding for community colleges back to 1994 levels. (Garcia, 2004)

Historical Overview

The junior college movement began in Texas in the 1890s with the establishment of Decatur Baptist College (established in 1891 or 1892; now Dallas Baptist University). Decatur Baptist College was not just the first junior college in Texas but arguably was

one of the first junior colleges in the nation. Decatur Baptist College, however, was a private, religious institution. The first publicly supported junior college in Texas, Wichita Falls Junior College, was established in Wichita Falls, Texas in 1922 (Handbook of Texas Online, 2003). In 1929, the 41st Legislature provided state sanction to the junior college movement and established the junior college as an extension of the high school. Significantly, the junior college movement was closely tied to the public school system rather than the state's four-year colleges and universities (Handbook of Texas Online, 2003).

The first direct state aid for junior colleges occurred as the result of legislation passed in 1941 by the 47th Legislature, which authorized funding in the amount of $50.00 per full-time equivalent student (FTE). An FTE was considered to be an annual course load of fifteen (15) semester hours. Twenty-two public junior colleges were named in the legislation for the purpose of receiving state appropriations. This enabling statute served as the backbone for the establishment of community colleges that was to occur in the baby boom. (Barron, 2003)

In 1963, Governor Connally called for the state to greatly expand its public system of four-year universities and junior colleges. According to the Texas Handbook Online:

> He had a vision of moving Texas into a dynamic era and entered the governorship saying that his administration should emphasize one of three critical issues of the day: education, race relations, or poverty. He chose to be an "education governor" both because he believed that the most enduring way to address social problems was through education and because he "had a farm boy's dream to become the governor of the intellectuals and of the cultivated." Connally effectively used his political skills to increase taxes substantially in order to finance higher teacher's salaries, better libraries, and new doctoral programs. He considered this the crowning achievement of his administration. (Handbook of Texas Online, 2003)

Bill J. Priest, founding chancellor of the Dallas County Community College District (1965-1981), indicates that Connally raised community colleges to a new level of inclusion and respect through broad proclamation of their importance in meeting the public need. Connally legitimized community college access to the political arena and substantially improved existing methodologies of finance and governance. Community colleges were now seen as a means of serving the larger population centers of the state rather than simply meeting the needs of rural areas (Priest, 2003).

The 61st Legislature (1969) first placed the state's community colleges in the ranks of institutions of higher learning through the newly created Texas Higher Education Coordinating Board (THECB). As a result of the leadership provided by then-Governor Connally, leadership molded by the Johnson era policies of the Great Society and the War on Poverty, state leaders moved to establish formula funding as a means of providing open door access to academic and technical education for the residents of the state (Priest, 2003).

In his original charge to the THECB in 1965, Governor Connally made several points which served to fashion the future of education in Texas. Relevant excerpts from his speech follow:

> For the first time , junior colleges under your direction have become full partners in our total higher educational endeavor, and I urge you never to forget that the best classroom instruction may well exist in these institutions. They are unfettered by elaborate administrative structures, extensive research commitments, and faculty promotions dependent upon scholarly publications, the junior college instructor can devote his full energy and enthusiasm to teaching the student. He can demonstrate a personal interest. In short, he is certainly the equal of his fellow faculty members in four-year institutions and should be treated as such.
>
> It will be your task and you must see that he is provided equipment and teaching materials comparable to those provided to his counterparts who teach

> freshman and sophomores in four-year colleges and universities - - and he is entitled to comparable salaries.
>
> … It is obvious that the expansion of junior colleges to senior colleges cannot go on forever. A second-rate senior college is no adequate substitute for a first-rate junior college. Neither is senior college status a reward for outstanding performance as a junior college, nor is it a trophy to be captured in the political arena, nor a means to transfer the check for its operating costs from the community to the state. (Connally, 1965)

In this environment the comprehensive community college was born. The progressive establishment of community colleges was intended to provide a skilled and educated citizenry upon which the state could build a better society of opportunity and inclusion (Priest, 2003). This progressive legislation recognized the legality of existing junior colleges, many of which were municipally controlled. It permitted and encouraged organization by counties, and many, but not all, of the existing municipal junior colleges held elections and expanded their taxing districts to the county level.

The importance of Connally's contributions in molding today's community colleges in Texas cannot be overstated. He was an avid proponent of the community college as more than a means to provide educational services in the rural way-stations of the state. Connally strongly supported the establishment of community colleges in metropolitan areas as a means of serving the diverse population of the state. (Priest, 2003)

The 1969 legislation should not be blamed for the subsequent difficulties associated with providing equal access to higher education to all residents of Texas. If fault is to be assessed, it must rest with the state's subsequent failure to complete the vision provided by the 61st Legislature (Priest, 2003). The 1969 act was permissive. The act did not require existing municipal colleges to expand their taxing districts to counties,

nor did it require counties to establish community colleges. The act legally authorized establishment of community colleges and permitted, for the first time, the creation of multi-county community college districts. The practical effect of the act was to promote community college establishment by counties, not unlike that which occurred in North Carolina. But unlike North Carolina, the 1969 enabling law in Texas did not assign each and every citizen and county to a community college district. This did not occur in Texas until a statute was passed in 1995 which assigned 95% of the populace to a community college service area.

The 1969 law did not suggest universal access to the 13th and 14th grades as a responsibility of the state. The 1969 law permitted the establishment and expansion of community colleges. More importantly, it provided state funding in support of instruction for those colleges that did come into being. The 1969 law allowed cities to create community colleges, but in reality promoted a "county college" model, because county-level elections could most easily be organized. It was possible, but difficult under the 1969 enabling law, for rural counties to come together to create multi-county districts.

As a result of the 1969 enabling statute, the 61st legislature established the THECB in 1969, placed institutions of higher education under oversight of the agency and provided formula-based appropriations to provide quality educational opportunity to the baby boomer generation.

Another twenty-seven years passed before the Texas Legislature established community college service areas. Senate Bill 397, sponsored by Senators Bill Ratliff and Tom Craddick, formally accomplished this task for 95% of the state's population. The impetus for the 1995 law was the challenge of meeting the needs of citizens not residing

in community college taxing districts. (Barron, 2003)

Senate Bill 397 created service delivery areas for each and every one of Texas' fifty community college districts. Some geographic areas were not included in this assignment because existing community colleges could not agree as to which institution would provide instructional services. The 1995 law created the legal, yet to the public largely artificial, distinction between a community college "taxing district" and a community college "service area." For example, the previous 1969 enabling law allowed Southwest Texas Junior College (SWTJC) in Uvalde to come into being with a three-county taxing district. In 1995, eight new counties were officially recognized as belonging to the service area of SWTJC. As a result, this service area is now larger than the entire state of Massachusetts. Eighty percent (80%) of citizens in SWTJC's state-assigned service area live outside the three counties forming the college's original constituted taxing district. Since the 1995 law did not require newly added counties to join the taxing district, every one of SWTJC's elected trustees must come from the three taxing counties that have 20% of the service area's population. These trustees establish college policy, oversee the delivery of services, and set tuition and fee rates for the entire district.

By formally assigning geographic service areas, SB 397 allowed community college districts to more adequately plan for their futures. To serve Texas' fast growing population, community college boards could now build new campuses in their mandated service areas that lay outside their established taxing districts without the assistance of local property taxes. Prior to the 1995 law, several community colleges had constructed facilities outside their taxing districts; however, the construction of facilities outside of

the taxing district was fraught with uncertainty since legal jurisdiction over a given geographic area might be disputed or contested. The 1995 legislation was designed to end these debates without precluding future creation of new community college districts within the untaxed service areas. Subsequent legislation has been passed to facilitate the efforts of community colleges wishing to annex service areas into their taxing districts (Garcia, 2004).

The passage of SB 397 and publication of Closing the Gaps by 2015: The Texas Higher Education Plan marked a significant advancement for Texas towards a state-wide community college system for all residents of the state. Community colleges were officially recognized as major players in achieving both the participation and success goals. THECB officials estimated that 300,000 of the 500,000 new students or 60% would begin at Texas community and technical colleges. THECB officials also realize that transfer from two-year to four-year institutions must be dramatically improved to move larger numbers of students through the system. Community colleges were viewed as integral for the achievement of this goal (Closing the Gaps, 2001).

The Texas Community College System

Under the permissive Texas enabling laws, community colleges were established taxing entities. A three-way partnership between the state, local taxpayers, and students was created to fund the costs associated with the community college district. Local units of government proposing the establishment of a community college were required through local ad valorem taxes to fund, maintain and operate facilities. The state of Texas was to pay the entire instructional costs associated with the new institutions. Reynaldo Garcia, Executive Director of the TACC, asserts that the role played by student

tuition and fees was not clearly assigned as either local or state revenue although the legislation clearly places it under the jurisdiction of the local community college governing boards. Thus, it was assumed to constitute yet another source of local revenue (Garcia, 2004).

The original vision was clearly that of delivering educational services to residents within the taxing districts (in-district students). Priest asserts that if Texas community colleges are anything, they are entrepreneurial in nature. Viewing education as a ticket to a better life while adhering to philosophies of inclusion, these open-access institutions are extremely creative in overcoming bureaucratically imposed barriers. Almost from their inception, community colleges in Texas extended services to in-state students not residing in their taxing districts and also opened their doors to out-of-state residents. This rapid expansion of service required a patch-work modification of the Texas community college funding mechanism almost from its inception. (Priest, 2003)

Texas Community College Funding

Texas public community colleges are under the immediate direction of 50 independently elected boards charged with establishing property tax rates and setting student tuition charges, among other responsibilities. The THECB distributes state appropriations at the direction of the Legislative Budget Board (LBB). The diversity of these local boards, coupled with state control, has served to make the Texas community college funding process extremely complex. This complexity has undoubtedly confounded some of the best attempts at meaningful analysis.

Comparisons of tuition revenue are very difficult to establish under the Texas system. For example, one community college may employ a simple tuition structure

which clearly establishes tuition rates for in- district state residents, out-of- district state residents, and for non-state residents. Another may utilize a complex blending of tuition and student fees to assess students for educational services. A third may also include additional charges such as matriculation and parking fees. The actual cost per student can only be obtained by examining practices at each institution to ensure that all relevant charges are included. The delivery of educational services to residents of Texas living outside the taxing district (out-of-district students) and non-Texas residents (out-of-state students) coupled with the diversity in subsequent shifts in the tuition and fee rates further complicates an already convoluted structure. The collection of ad valorem property taxes outside the established community college district through the establishment of maintenance taxing districts (Branch Campus Maintenance Tax) by some Texas community colleges for the purpose of supporting out-of-district facilities even further confounds analysis.

Texas community colleges regularly export educational services outside their taxing districts, many often building and maintaining facilities without the assistance of ad valorem property taxes. Even those colleges which have implemented maintenance taxing districts to support the operations of these facilities often began the delivery of educational services without local support. Consequently, most Texas community colleges have at least three designations of tuition: in-district, out-of-district and out-of-state.

Texas funds direct instructional expenditures for all three classifications of students: in-district, out-of-district and out-of-state. Reimbursement for instructional costs generated by out-of-state students is highly irregular and appears to have become a

practice because of the state's structure for funding universities which are required to count these revenues as a portion of their state appropriations. The tuition differentials charged to out-of-state students might be labeled as a windfall for the state's community colleges since they do not negatively impact state appropriations.

Though providing for community colleges has been a shared responsibility between the state, local taxpayers and students, the state has *never* fully funded its share of the costs. Table 3 demonstrates how state appropriations have fluctuated since 1990 even in the midst of a strong Texas economy. With the recent economic downturn, the state has further reduced the percentage of formula funding. A review of the percentage of the formula funded during the last eight legislative sessions paints a dismal picture.

Table 3

State Appropriations for Texas Community Colleges FY 1991 to FY 2004

Legislative Year	Full Formula	State Appropriation	% of Formula
FY 1990-91 (71st)	$ 1,262,678,050	$ 979,989,688	77.6%
FY 1992-93 (72nd)	$ 1,403,420,982	$ 1,085,425,541	77.3%
FY 1994-95 (73rd)	$ 1,327,449,865	$ 1,186,602,613	89.4%
FY 1996-97 (74th)	$ 1,780,430,279	$ 1,146,743,480	64.4%
FY 1998-99 (75th)	$ 2,064,285,863	$ 1,335,767,315	64.7%
FY 2000-01 (76th)	$ 2,037,870,456	$ 1,447,316,803	71.0%
FY 2002-03 (77th)	$ 2,328,185,806	$ 1,569,157,590	67.4%
FY 2004-05 (78th)	$ 2,892,130,102	$ 1,501,275,023	51.9%

Source: Texas Association of Community Colleges

The 76th Legislature (FY 2000-01) funded 71% of the formula. The 78th Legislature (FY 2004-05) reduced the level even further, funding only 51.9% of the formula on a state-wide basis. Local taxing districts, students, and their families have been, in effect, asked to make up the shortfall in state investment. There is increased

concern among leading practitioners regarding disparities in funding, as Texas appears to be transitioning towards a primarily locally funded community college system (Garcia, 2004).

Though the primary revenue streams of state appropriations, ad valorem property tax levies, and student tuition and fees do not constitute the only sources of income for the community colleges of Texas, they are of primary importance to the health and viability of these institutions. Fluctuations and/or disparities in any or all of these revenue streams can greatly impact the delivery of educational services to the state's diverse population (Garcia, 2004).

In summary, state appropriations are assigned based on a system of formula funding. Property tax levies are collected only from those residents living inside the community college taxing district. Student tuition is divided into three main categories: in-district tuition for state residents residing inside the taxing district, out-of-district tuition for state residents residing in the service area and out-of-state tuition for non-Texas residents.

The THECB evaluates the Closing the Gaps initiative utilizing an annual progress report. A review of the Closing the Gaps by 2015: 2003 Progress Report indicates no examination of funding equity among Texas community colleges as a means of ensuring the achievement of participation and success goals.

Local Revenue Streams

Educational participation and success have long been linked to the cost of education. This is particularly true for the ethnically diverse population of Texas. For this reason, adequate state appropriations and tax levies are critical factors affecting the

cost of tuition. Examination of demographic data for the top ten community colleges by percentage of enrollment for Hispanic, African-American and Caucasian serving Texas community colleges reveals a difference in the percent of service area population residing within the taxing district.

Table 4

Community College Service Area Populations

Community College	Average Service Area Population	Average Taxing District Population	Average Percent of Population Living in the Taxing District
Hispanic	475,774	360,980	61.2%
African-American	582,299	419,213	51.7%
Caucasian	201,872	65,555	35.5%

Source: The top ten community colleges by percentage of enrollment for Hispanic, African-American and Caucasian serving institutions were identified from information obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook. All subsequent numbers and percentages were calculated from data obtained from the same source.

The issue of in-district versus out-of-district enrollment does not appear to affect Hispanic and African-American serving institutions at the same level as it affects Caucasian serving institutions. Hispanic and African-American institutions are generally larger institutions with larger service area populations more likely to reside within the college taxing district. As such, funding issues relating to the differentials for in-district tax revenue and out-of-district fees appear to be of greater importance to Caucasian serving institutions.

Student tuition and fee rates for the three indicated categories of community colleges are indicated in Table 5.

Table 5

Community College Tuition Rates by Ethnic Enrollments

Community Colleges	1997-98 Tuition Rates			2002-03 Tuition Rates		
	In-District	Out-of-District	Out-of-State	In-District	Out-of-District	Out-of-State
Hispanic	$411	$596	$1,286	$549	$730	$1,235
African-American	$312	$457	$735	$388	$591	$930
Caucasian	$347	$445	$731	$445	$593	$940

Source: The top ten community colleges by percentage of enrollment for Hispanic, African-American and Caucasian serving institutions were identified from information obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook. All subsequent numbers were calculated from data obtained from the TACC Website.

Initial analysis indicates that tuition rates at Hispanic-serving institutions are much higher than at African-American and Caucasian serving institutions. Table 6 tracks the rates of increase from 1997-98 to 2002-03.

Table 6

Percentage of Tuition Increase from 1997-98 to 2002-03

Community Colleges	2002-03 Tuition Rate Increases		
	In-District	Out-of-District	Out-of-State
Hispanic	33.6%	22.5%	-4.0%
African-American	24.4%	29.3%	26.5%
Caucasian	28.2%	33.3%	28.6%

Source: Calculated from information contained in Table 5.

In-District tuition at Hispanic-serving institutions has increased more rapidly than any other category or classification. Not only are students at Hispanic-serving institutions paying more, if the trend continues, the cost to Hispanic students will continue to escalate. The current economic situation in Texas offers little hope of reversing this trend (Garcia, 2004).

Examination of tax levy rates further highlights the plight of Hispanic serving community colleges in Texas as indicated in Table 7.

Table 7

Community College Average Maintenance and Operation (M&O) Levy Rates per $100 Valuation

Community Colleges	1997-98	2002-03
Hispanic	0.128092	0.150173
African-American	0.119493	0.134717
Caucasian	0.114401	0.126883

Source: The top ten by percentage of enrollment for Hispanic, African-American and Caucasian serving institutions were identified from information obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook. All subsequent numbers were calculated from data obtained from the TACC Website.

The disparity identified in tuition rates is equally evident and even more pronounced in the average M&O tax levy rates of Hispanic institutions. Likewise, these rates are increasing more rapidly for Hispanic-serving institutions demonstrating a 17.2% increase from 1997-98 to 2002-03 compared to 12.7% for African-American and 10.9% for Caucasian-serving institutions. Similar to their rural counterparts, urban Hispanic-serving community colleges are finding themselves in the position of struggling to keep up with the demands of their service areas. Their struggle encompasses higher property tax levy rates and more rapidly increasing student tuition and fee rates than for African-American and Caucasian serving community colleges.

The Closing the Gaps by 2015: 2003 Progress Report can be interpreted to indicate that these factors may be taking a toll on the ability of Hispanic-serving community colleges to meet the needs of their service areas. In reference to the participation target, the report states:

> …78 percent of the overall 2005 target was reached in 2002, including 71 percent of the Black target, 35 percent of the Hispanic target, and 203 percent of the White target. (Closing the Gaps by 2015: 2003 Progress Report, 2003).

These findings indicate a need for a careful analysis of the revenue streams for the Hispanic-serving community colleges in the state to ascertain whether barriers exist that may be hindering the success of Texas' participation goals as listed in Closing the Gaps by 2015, the state's higher education master plan.

The Texas Challenge and The New Texas Challenge

Texas State Demographer, Steve H. Murdock, began an educational revolution in Texas with the 1997 publication of The Texas Challenge: Population Change and the Future of Texas. Murdock's work projected emerging demographics that could create a series of scenarios regarding the future of the state. To simply say that Murdock began an educational revolution may be a significant understatement. In The New Texas Challenge: Population Change and the Future of Texas (2003), State Senator Teel Bivens, a veteran legislator with a distinguished record of public service, provides insight into the political ramifications associated with Murdock's work. In the foreword to The New Texas Challenge, Senator Bivens states:

> I know of no work that offers a clearer vision of what is at stake for our state than the book you currently hold in your hands. The New Texas Challenge has had a greater impact on me as a legislator than any other scholarly work I have received. (Murdock, 2003, pp. xxxiv)

Don Brown, Texas Commissioner of Higher Education, comments on the importance of Murdock's Texas Challenge in regard to Closing the Gaps: The Texas Higher Education Master Plan.

> The Texas Challenge is the foundation for Closing the Gaps. Looking back on the process that led to Closing the Gaps, I now realize that all of

> us began by asking what would be the worst thing that could happen to our state and people that education could prevent. We concluded the worst thing would be for the terrible part of Dr. Murdock's forecast to come about: that Texas would become a less and less well educated state with fewer opportunities for all our people. We next recognized that to prevent that 'worst thing' from happening, we would have to close the gaps in participation, success, excellence and research by 2015. (Brown, 2004)

Murdock's demographic analyses take on new meaning in the current environment of increased demand, demographic transition and reduced state funding. Senator Bivins sums up the significance of Murdock's considerable contributions to public policy. Bivins' observations call for continued review of the state's demography as the foundation for public policy.

> Over the years I have developed a great respect for Dr. Murdock and his work. This book is just the latest in many endeavors in which he has proven the importance of demography to public policy. (Murdock, 2003, pp. xxxvii)

Demographic Transition

The Texas Challenge and The New Texas Challenge examine demographic shifts within the state as a means of guiding public policymakers through the utilization of four major population trends. Murdock states:

> In particular, we assess the implications of four major trends in Texas population:
>
> 1) The changing rate of population growth and the relative role of migrations and immigration in that growth,
> 2) Aging of the population,
> 3) Growth in the size of the minority population, and
> 4) The changing composition of households. (Murdock, 1997, pp. 4)

The Texas Challenge and The New Texas Challenge utilize parallel methodologies to analyze the state's demographic transitions. Each concludes with an

assessment of policy implications and alternative futures. Both works include an admonition for extensive action to prepare the state to assimilate immigrants, accommodate nontraditional household forms, adjust to an aging population and invest in the socioeconomic improvement of a rapidly increasing Hispanic minority to majority population movement.

Comparative Review

Given the impact of The Texas Challenge in motivating the state's policy makers to action, questions arise concerning the corresponding demographic projections in The New Texas Challenge. Does the second work paint a more dismal picture of the Texas future than did the first? Are the demographic shifts more or less pronounced than when reviewed in 1997? While extensive analysis of this question is beyond the scope of this review, some observations can be made. Through simple comparison of portions of Murdock's tables, broad observations can be made as to whether or not the demographic projections meet, fail to meet or exceed original estimates.

Methodology

Limited comparison between the projections of The Texas Challenge and those of The New Texas Challenge can be accomplished through focused scenario examinations. Speculative extrapolation may be utilized to address the relation of identified demographic trends to the remaining scenarios. The six categories of population estimates and percent of total population, households, population age, income, age of labor force and educational attainment are contrasted in the following tables. As far as possible, scenarios which utilize net migration levels equal to those from 1980 to 1990

have been utilized. In several cases table values have been derived from Murdock's numbers.

Population Estimates and Percent of Total

Comparison of 2010 population estimates indicates that original projections concerning the Anglo population appear to have remained intact (Murdock, 1997, pp.16, 2003, pp. 24). However, the remaining three ethnic categories indicate significant increases. As revealed in Table 8, comparison of 2010 population estimates indicates that original projections concerning the Anglo population appear to have remained intact. However, the remaining three ethnic categories indicate significant increases.

Table 8

Population in Texas by Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

2010	Anglo	Black	Hispanic	Other	Total
The Texas Challenge	11,699,905	2,632,711	8,710,050	1,056,340	24,099,006
The New Texas Challenge	11,700,471	2,863,397	10,164,378	1,168,772	25,897,018
Numeric Change	566	230,686	1,454,328	112,432	1,798,012
Percent of Change	0.0%	8.8%	16.7%	10.6%	7.5%

The Hispanic population posts the largest numerical and percentage increase. Projections in The New Texas Challenge have increased Murdock's predictions concerning this segment of the population from 8.7 million to 10.1 million, an increase of 16.7% or slightly over 1.4 million persons. It is interesting to note that The New Texas Challenge projects the Hispanic population at 10.1 million, a number which is very close in size to the projected Anglo population of 11.7 million. Texas is rapidly approaching the point in which the size of the Hispanic population will surpass that of the Anglo population. Projections for the segments of the Texas population classified as Black or

Other also exceed the original forecasts.

Table 9

Percent of Population in Texas by Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

2010	Anglo	Black	Hispanic	Other
The Texas Challenge	48.6%	10.9%	36.1%	4.4%
The New Texas Challenge	45.2%	11.1%	39.2%	4.5%

Table 9 reveals that the Anglo population is projected to decline from 48.6% of the total population to 45.2% while at the same time projections for the Hispanic population increased from 36.1% to 39.2% (Murdock, 1997, pp. 21, 2003, pp. 27). While the concept that Texas will be a minority-majority state in 2010 is not new, it is of interest to note that the Anglo population is now anticipated to be a smaller minority than was previously envisioned. Texas will be a much more ethnically diverse state with a rapidly increasing Hispanic population that is likely to surpass the Anglo population shortly after the year 2010. Certainly, these demographic shifts will have a significant impact upon Texas in general.

Households

Murdock has increased his projections for the total number of households in the Texas by 293,915 households or approximately 3.2%. Projections relative to Anglo households indicate a decrease of 81,189 households or a decline of 1.6%. Households among the Hispanic and Black populations have been expanded by 284,822 (10.7%) and 60,002 (6.1%) respectively. Households classified under Other remain relatively constant (Murdock, 1997, pp. 37, 2003, pp. 41).

Table 10

Number of Households in Texas by Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

2010	Anglo	Black	Hispanic	Other	Total
The Texas Challenge	5,031,608	978,977	2,671,248	413,838	9,095,671
The New Texas Challenge	4,950,419	1,068,979	2,956,070	414,118	9,389,586
Numeric Change	-81,189	60,002	284,822	280	293,915
Percent of Change	-1.6%	6.1%	10.7%	0.1%	3.2%

The data in Table 10 indicate over a quarter of a million new Hispanic households in Texas. When coupled with the 1.4 million population increase indicated in Table 1, this clearly demonstrates that the Hispanic sector of the population constitutes the most rapidly growing demographic classification within the Texas population. Texas is projected to become increasingly a state with a very significant number of Hispanic households.

Population age

The New Texas Challenge (2003) indicates that Texas will become younger than first expected. As demonstrated in Table 11, the age demographics of the Anglo population sharply contrast with those of the remaining population (Murdock, 1997, pp. 43, 2003, pp. 45).

Table 11

Percent of Households by Age and Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

2010	Anglo		Black		Hispanic		Other		Total	
Murdock	1997	2003	1997	2003	1997	2003	1997	2003	1997	2003
15-24	5.4	5.3	6.6	6.6	6.4	7.7	4.5	5.5	5.8	6.3
25-44	33.0	31.8	39.8	39.8	47.3	51.3	37.2	44.7	38.1	39.5
45-64	39.7	40.2	39.6	39.6	34.3	30.8	46.5	38.6	38.4	37.0
65+	21.9	22.7	14.0	14.0	12.0	10.2	11.8	11.2	17.7	17.2
Median Age	50.4	51.0	46.5	46.1	43.5	41.5	48.1	44.9	47.8	47.0

While sections of the population classified as Black, Hispanic and Other are predicted to experience growing shifts into younger categories, the median age for the Anglo population has been increased from 50.4 to 51.0. The section of the population classified as Other experienced the greatest lowering of the median age of any group dropping from 48.1 to 44.9. The median age for the Hispanic population has also been lowered from the original projection of 43.5 to 41.5. All of this indicates that Murdock now believes Texas will have a younger population than was first anticipated.

Household income, labor force age and educational attainment

Due to the structure employed by Murdock in projecting household income, the age and the educational attainment of the Texas labor force, direct point-to-point comparison is not possible. Instead Tables 12, 13 and 14 compare The Texas Challenge projections for 2030 to The New Texas Challenge projections for 2040. Although comparative analysis is not possible as in the preceding four tables, the next three tables yield some understanding of challenges that Texas is certain to face in the future.

Table 12

Percent of Household Income in Texas by Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

Income Category	Anglo		Black		Hispanic		Other	
Murdock	1997	2003	1997	2003	1997	2003	1997	2003
Projection	2030	2040	2030	2040	2030	2040	2030	2040
$<10,000	27.8	18.3	14.2	13.1	49.5	58.6	8.4	9.9
10,000-14,999	33.4	22.3	10.4	10.0	47.9	60.5	8.3	7.2
15,000-24,999	38.4	22.7	9.8	9.0	43.8	61.0	8.0	7.3
25,000-34,999	43.9	25.5	8.9	8.5	39.0	58.7	8.2	7.3
35,000-49,999	50.2	29.2	8.0	8.0	33.9	54.8	7.9	8.0
50,000-74,999	59.3	34.7	6.7	7.6	25.6	47.4	8.5	10.3
75,000-99,999	68.1	42.0	4.7	7.1	16.9	38.8	10.2	12.1
100,000+	74.3	48.9	2.4	8.7	12.5	27.3	10.8	15.1
TOTALS	29.2	29.0	6.7	9.0	27.3	52.8	5.7	9.2

The ideal distribution of household income by race/ethnicity would indicate a striking similarity between the percentage within each income group for each ethnic classification and the ethnic classification's overall percentage of total households within the state. This is not the case. The Anglo population in the 2030 projections provided by The Texas Challenge only account for 29.2% of the total households but account for 74.3% of the households earning at or above $100,000 per year. In sharp contrast, Hispanic households account for 27.3% of all households but post only 12.5% earning at or above $100,000 per year. Likewise, Hispanic households are unduly shifted into lower income categories by posting 49.5% of those with annual earnings of less than $10,000 per year, an amount well below expectations. The 2030 projections depict a similar pattern exists among Black households which account for 6.7% of total households but are indicated as having only 2.4% of those earning at or above $100,000 per year.

Households classified as Other constitute only 5.7% of the total yet have 10.8% earning at or above $100,000 per year (Murdock, 1997, pp. 60, 2003, pp. 59).

The 2040 projections of The New Texas Challenge appear to indicate some leveling of incomes between Murdock's four ethnic groupings. Though the classifications of Anglo and Other continue to post percentages earning at or above $100,000 per year, well beyond their share of the state's total households, significant gains are projected for Black households. Hispanic households earning at or above $100,000 per year continue to fall short of expectations. The data indicate that Texas will not only be ethnically more diverse with a younger population but that the Hispanic portion of the population will continue to lag in earning power as compared to the remaining ethnic classifications (Murdock, 2003, pp. 59).

As Texas gains a younger and more ethnically diverse population, these changes will inevitably be reflected within the civilian labor force. Percentages by workforce age grouping for each ethnic classification are detailed in Table 13. Murdock has provided an analysis by specific age category for the purpose of making relative comparisons of the labor force by ethnicity.

Table 13

Percent of the Labor Force in Texas by Age and Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

Age Category	Anglo		Black		Hispanic		Other	
Murdock	1997	2003	1997	2003	1997	2003	1997	2003
Projection	2030	2040	2030	2040	2030	2040	2030	2040
16-19	4.2	4.3	5.3	4.3	5.4	5.2	2.7	3.2
20-24	8.0	8.6	11.3	9.9	11.9	10.3	5.9	6.3
25-34	20.5	20.8	24.3	21.0	26.6	22.3	16.7	15.8
35-44	23.8	21.4	24.8	21.9	23.9	24.6	21.8	28.4
45-54	22.3	21.8	19.9	22.7	18.6	21.8	25.3	24.3
55-59	8.8	8.9	7.2	9.6	6.7	8.3	10.5	7.5
60-64	5.8	5.8	3.9	5.2	3.9	4.6	7.7	5.8
65+	6.6	8.4	3.3	5.4	3.0	2.9	9.4	8.7

Both of Murdock's works indicate that the Texas civilian labor force will grow substantially younger throughout the upcoming decades. Comparison of the projections for 2030 to those of 2040 indicates that the percentages of workers from age 55 and above will increase among Anglos and Blacks. Younger workers will obviously experience competition for jobs from seniors who have chosen not to leave the workforce. The data strongly imply the existence of a younger and more impoverished population (Murdock, 1997, pp. 110, 2003, pp. 125).

Most reasonable people will agree that educational attainment directly correlates with earning power and the availability of desirable employment. Table 14 provides tabulated percentages based on Murdock's analysis of educational attainment by ethnicity for the Texas labor force (Murdock, 1997, pp. 114, 2003, pp. 127).

Table 14

Percent of the Labor Force in Texas by Level of Educational Attainment and Race/Ethnicity Assuming Rates of Net Migration Equal to Those of 1980-90 (1.0)

Educational Category	Anglo		Black		Hispanic		Other	
Murdock	1997	2003	1997	2003	1997	2003	1997	2003
Projection	2030	2040	2030	2040	2030	2040	2030	2040
Less than 9th grade	6.0	2.5	19.6	1.4	67.2	89.4	7.3	6.7
9th to 12th grade, no diploma	27.6	14.3	7.4	5.7	58.3	74.0	6.6	6.0
High school graduate	41.7	24.3	6.5	9.9	45.2	58.0	6.6	7.8
Some college, no degree	51.3	31.7	6.0	12.5	37.0	50.5	5.8	5.3
Associate degree	45.4	35.2	8.7	9.2	37.1	48.6	8.8	7.0
Bachelors degree	62.2	47.9	5.2	6.3	22.1	32.3	10.4	13.5
Graduate or professional degree	56.6	39.2	6.1	9.7	19.4	29.6	17.8	21.5
Total labor force	37.6	25.2	9.1	7.9	45.6	58.7	7.8	8.2

The major issue related to the educational level of the workforce is evidenced in the projections for the portion of the Hispanic population holding less than a high school diploma. Murdock's projections indicate that the Hispanic population of Texas will not only be younger than first anticipated but is more likely to be a less educated workforce than other ethnic counterparts. Murdock states,

> Hispanics will account for a larger percentage of the total number of people at all educational levels than they did in 2000. When compared to the total labor force, however, Anglos and persons from the Other racial/ethnic group form larger proportions in the categories with the highest level of education, whereas the opposite is generally true for Hispanics. (Murdock, 2003, pp. 126)

Simply put, Murdock does not project that Texas will make the adjustments necessary to provide educational opportunity to all the state's residents, most especially those of Hispanic descent. The warnings indicate that the state's failure to respond will result in unparalled economic difficulty. Texas will indeed become a more impoverished and less educated state with fewer opportunities for its people.

Texas Responds

As previously stated, Texas responded to Murdock's projections with Closing the Gaps by 2015: The Texas Higher Education Master Plan. This ambitious plan established goals in the areas of participation, success, excellence and research. Participation and success goals are of particular relevance to the state's community colleges. The Closing the Gaps Second Annual Summary Report on Texas Higher Education's Progress reviews success in meeting 2005 benchmarks. In the areas of participation and success several interesting facts emerge (Closing the Gaps Second Annual Summary Report on Texas Higher Education's Progress, 2003, pp. 4).

Table 15

Progress Towards Participation Targets for 2005 (Published Targets for Participation have been Adjusted to Match Revised Statewide Population Projections)

Type of Enrollment (Public and Independent Institutions)	*Closing the Gaps* Targets for 2005	Fall 2000	Increase in 2002 from 2000	Increase to Reach 2005 Targets	Percent of Target Increase for 2005 Achieved
Total Enrollment	1,169,000	1,019,879	115,913	150,000	78%
Black	132,000	108,463	16,807	23,500	71%
Hispanic	340,000	237,394	36,340	102,600	35%
White	591,000	570,042	42,575	21,000	203%

Hispanic participation in higher education during this time frame obviously lagged behind other sectors. The posted increase also appears to be very polarized. One-half of the additional Hispanic enrollments in higher education can be accounted for by twelve institutions: eight community colleges and four universities. The Metroplex, Gulf Coast and South Texas regions combined represent 67% of the state's total enrollment increase in Texas higher education while public two-year institutions account for 58% of

this increase (Closing the Gaps Second Annual Summary Report on Texas Higher Education's Progress, 2003, pp. 3-5). The apparent failure of efforts to significantly enlarge Hispanic participation rates in the Texas higher education system to target levels is particularly alarming in light of Murdock's 2030 and 2040 projections concerning a younger, more impoverished and less educated Hispanic population.

Hispanic success in higher education has faired little better than have Hispanic participation rates. Goals for Closing the Gaps only track degree and certificate completion rates for Blacks and Hispanics and do not include success rates for the classifications of Anglo and Other. While approximately 79% of the Black target for 2005 was realized in 2002, only 38% of the Hispanic target was achieved (Closing the Gaps Second Annual Summary Report on Texas Higher Education's Progress, 2003, pp. 9).

Conclusion

The New Texas Challenge (2003) reveals that Texas will experience more substantial demographic shifts than anticipated in The Texas Challenge (1997). Texas is certain to not only become more diverse but to also include a much larger Hispanic population. If the trend continues, the population of Texas will grow younger and less educated, a sure prescription for poverty and related social ills.

Closing the Gaps: The Texas Higher Education Master Plan

In response to Murdock's projections the THECB began development of a new master plan for higher education in March of 1999. This new goal oriented plan emphasized state and institutional performance measures though the majority of these measures were institutional in nature. The THECB appointed a twenty-four member

planning committee and charged them with reviewing all pertinent information, formulating a plan for higher education in Texas and establishing performance measures with appropriate success criteria. This broad-based planning committee included leaders from the community, business and higher education. Four task forces were also appointed to address issues relating to compliance with federal requirements, participation and success, health professions and the development of the technology workforce.

A draft plan was submitted to the THECB in July of 2000. This plan was subsequently distributed to 1,500 people and/or groups for comment. The THECB formally approved Closing the Gaps: The Texas Higher Education Master Plan in October, 2000.

Goals and Objectives

As previously stated, Closing the Gaps was intended to establish specific goals to improve the performance of the Texas system of higher education. The plan established a fifteen year time frame. From its inception, Closing the Gaps contained an apparent flaw. Successful implementation of these state-wide goals spoke to the adoption and compliance of the state's institutions of higher education but did little to examine such issues as legislative adoption and funding of the initiative. TACC draws attention to the state's failure to provide adequate funding in support of Closing the Gaps in the TACC Legislative Priorities for 2005 which states:

> The decrease in appropriations to community colleges occurred while our colleges were successfully meeting the goals of Closing the Gaps.
>
> - 48 of 50 community college districts had increased enrollment from the previous base year; 33 colleges had 10 percent or more growth.

- 514,548 students were enrolled in semester-length credit courses for fall 2003. When the entire academic year is considered and students who enroll for non-semester courses are included, the total unduplicated enrollment at community and technical colleges is 1,108,242 students (AY 2002-03).
- … the 14.7 percent increase in student enrollment from one biennium to the next is unprecedented. (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 3-4)

In spite of the legislative funding deficiencies in the Closing the Gaps initiative, individual institutions were expected to achieve the identified goals of participation, success, excellence and research as appropriate for their role, scope and mission. The Legislature has defined the mission of the state's fifty community college districts as follows.

> Each college shall be a two-year institution primarily serving its local taxing district and service area and offering vocational, technical, and academic courses for certification or associate degrees. Continuing education, remedial and compensatory education consistent with open-admission policies, and programs of counseling and guidance shall be provided. Each college shall insist on excellence in all academic areas. (Texas Education Code 130.0011, 2002, pp. 664)

As statutorily mandated, the goals of participation and success are of critical to these open-admission institutions and the future of Texas.

Closing the Gaps does not specifically single out meeting the needs of the state's rapidly growing Hispanic population, but the impact of Murdock's demographic analysis is evidenced within the following narrative.

> At present, a large gap exists among racial/ethnic groups in both enrollment and graduation from the state's colleges and universities. Groups with the lowest enrollment and graduation rates will constitute a larger proportion of the Texas population. If this gap is not closed, Texas will have proportionately fewer college graduates. (Closing the Gaps, 2001, p. 0-4)

Participation

Closing the Gaps calls for the addition of 500,000 students within the state's higher education system within a fifteen year time span. A growth of this magnitude is equivalent to the combined annual enrollment of Alamo, Amarillo, Central Texas, Collin, Dallas, El Paso, Houston and Kilgore Community Colleges. Four strategies are identified to increase participation.

The first strategy recommends that the college-preparatory high school curriculum become the standard curriculum across the state. The plan establishes this curriculum as a minimum requirement for admission to Texas public universities by 2008 (Closing the Gaps, 2001, p. 9).

The second strategy addresses the need to recruit, train and retain qualified elementary and secondary school educators. The plan notes the existing shortage of public school teachers but does not establish action items to accomplish this strategy.

The third strategy calls for a statewide public awareness campaign to assist students and parents with the academic and financial preparation required for successful completion of the collegiate experience. The plan states:

> A sustained, statewide public awareness campaign, designed to reach Texas families through television, radio, newspapers, Internet-based communications and other avenues will give all Texans, particularly families with no previous college experience, information about the value of higher education and ways to access and pay for college. (Closing the Gaps, 2001, p. 1-2)

The last strategy focuses on the establishment of an affordability policy to ensure that all students are able to participate and succeed in higher education. Initiatives center on the availability of grants and scholarships, reasonable tuition and fee rates, and academic and administrative efficiencies within the higher education system. TACC

accordingly requests that the 79th Legislature increase funding for TEXAS Grant II to meet student financial need (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 6). This grant is accessible to the state's community college student population.

Success

Closing the Gaps proposes meeting the state's workforce needs by increasing the number of degrees and certificates awarded. Specifically, the plan mentions the need for improvement in the areas of nursing, technology-related disciplines and disciplines leading to careers in teaching. Five strategies are included in the plan: 1) increase graduation rates in education, engineering, computer science, mathematics, physical science, allied health, nursing and other critical fields, 2) carry out the state's Uniform Recruitment and Retention strategy, 3) fund increases in retention and graduation from high quality programs, 4) promote seamless transition, and 5) make partnerships between business/industry and higher education a part of the culture of these organizations. (Closing the Gaps, 2001, p. 1-3)

Excellence

Closing the Gaps calls for a substantial increase in the number of nationally recognized programs and services at Texas colleges and universities. Strategies call for the establishment of ladders of excellence for differing levels of institutions and for the establishment of competitive grants to obtain state-of-the-art equipment and software for high-tech instructional laboratories. Boyer observes that community college faculty may be at a disadvantage in pursuing grants since such is not normally viewed as a requirement for their positions (Boyer, 2004). This Closing the Gaps goal could benefit

the state's universities in lieu of the fifty community college districts.

Research

This last goal establishes a benchmark increase of 50% in the level of federal science and engineering research funding. Strategies permit universities to retain all overhead income from grants and contracts, establish the Texas Science and Engineering Collaborative, increase funding for advanced research/technology programs, and establish a competitive grant program to expand research capacity at developing research universities (Closing the Gaps, 2001, p. 1-7). Since research is not included in the mandated community college mission, this goal obviously addresses the state's university system.

Strategic Plan for Texas Public Community Colleges 2005-2009

The Strategic Plan for Texas Public Community Colleges 2005-2009 was submitted to the THECB by the Commissioner of Higher Education on July 2, 2004. This strategic plan is intended to establish performance benchmarks for the state's community colleges in compliance with House Bill 2517 passed by the 75th Texas Legislature. Both external and internal factors are examined as they relate to the performance of the state's fifty community college districts.

Assessment of External and Internal Factors

The strategic plan continues beyond a review of the changing Texas demographics and subsequent goals established in Closing the Gaps to discuss the important role played by community colleges in meeting the future employment needs of the state. Changes in the fiscal climate are noted for their impact upon community college funding. The report states:

> The shift in fiscal responsibility for support of Texas community colleges may have a deleterious effect on the continued positive economic impact these colleges have on the state, the taxpayers, and those who attend these institutions. If colleges must limit the educational opportunities due to decreased funding or must pass along the costs to local taxpayers and students through increased tuition, the economic future of Texas may be less sound than it is today. (Strategic Plan for Texas Public Community Colleges 2005-2009, 2004, p. 12)

Collins, Leitzel, Morgan and Stalcup have observed that the pursuit of additional local funding sources and increases in tuition and fees are primary defenses utilized by community colleges to counteract declining state appropriations (Collins, Leitzel, Morgan & Stalcup, 1994). Hedrick, Hightower and Gregory appear to concur (Hedrick, Hightower & Gregory, 2004).. While noting the utilization of short-term remedies designed to weather the fiscal storm, they identify changes that would subvert the mission of community colleges.

> A second path open to legislators and system administrators is to allow trends to continue that would effectively limit access to the community college. This path ultimately would lead to a paradigm shift redefining the mission of the community college. If it is accepted that the community college cannot be all things to all people, especially when the definition of 'all things' continues to expand, it would be determined that the community college system has reached its limits and must divest itself of some traditional areas of its mission. (Hedrick, Hightower & Gregory, 2004)

An economic impact study funded by TACC suggests that community colleges are producing significant returns for the state's economy, students and taxpayers. The total annual economic impact of these institutions is estimated at $13.5 billion. In a broad analysis TACC asserts that community colleges return $18 per year over the next 30 years for every dollar invested by state and local government (Christophersen & Robison, 2002). The Strategic Plan for Texas Community Colleges 2005-2009 accordingly indicates that Texas can ill afford permanent damage to the socioeconomic

benefits afforded by the State's public community colleges.

The plan identifies enrollment growth as one of the major factors facing community colleges. Reasons for enrollment growth include the following:

> A number of reasons may account for the rise in community college enrollments in Texas. Growth in the Texas population, lower costs associated with community colleges even though college costs in general continue to rise, the open-door nature of community college admission, increased demands of business and industry for highly skilled employees, and the availability of courses in traditional and non-traditional formats allowing for more evening classes or instructional telecommunication courses have all contributed to this increase in enrollments. (Strategic Plan for Texas Public Community Colleges 2005-2009, 2004, p. 16-17)

Performance Measures

Burke indicates that performance funding has risen to the forefront of the American political arena (Burke & Associates, 2002). The Strategic Plan for Texas Community Colleges 2005-2009 is consistent with this opinion and contains extensive discussion of performance measures. The plan identifies and defines nine elements to be included in an annual academic performance report. This performance report is to include: 1) the rate at which students completed courses attempted, 2) the number and types of degrees and certificates awarded, 3) the percentage of graduates who passed licensing exams related to the degree or certificate awarded, to the extent the information can be determined, 4) the number of students or graduates who transfer to or are admitted to a public university, 5) the passing rates for students required to be tested under the Texas Academic Skills Program, 6) the percentage of students enrolled who are academically disadvantaged, 7) the percentage of students enrolled who are economically disadvantaged, 8) the racial and ethnic composition of the district's student body and 9) the percentage of student contact hours taught by full-time faculty. These performance

measures are included in the reporting process to the Texas Legislative Budget Board for determining each institution's state appropriations. (Strategic Plan for Texas Public Community Colleges 2005-2009, 2004, p.23)

Hispanic-Serving Texas Community Colleges

Laden addresses the important role played by Hispanic Serving Institutions in meeting the educational needs of the Hispanic population.

> Hispanic –serving institutions (HSI's) are playing an increasingly larger role in providing college access and degree attainment for Hispanics, particularly at the community college level. These colleges and universities represent approximately 6% of all postsecondary institutions and 42% (1.3 million) of all Hispanic students enrolled in 1999. (Laden, 2004, p. 181)

According to Stearns, Watanabe and Snider, HSI's do much more than simply provide Hispanic students greater access to higher education. These institutions are primary providers of associates and bachelor degrees to Hispanic students, awarding more degrees in these categories than all other American colleges and universities combined (Stearns, Watanabe, & Snyder, 2002). The importance of meeting the educational needs of this segment of the population cannot be overstated when Hispanics constitute the largest minority group in the United States, approximately 12.5% of the population or 35 million persons (United States Bureau of Census, 2000).

Laden points out that several definitions of HSI's are in current use and provides the following explanation of federal definitions.

> In the broadest definition, HSI's are exactly what the name implies; They are colleges and universities that serve large numbers of students who self-identify as Hispanic or Latino. A specific, legal definition for HSI's was inserted into the Higher Education Act (HEA) of 1965, when it was reauthorized in 1994. The 1994 HEA, under Title III, defined Hispanic-serving institutions as accredited degree-granting, public or private, nonprofit colleges and universities with 25% or more total undergraduate

> Hispanic student enrollment. The definition allowed student headcount to determine the percentage of enrolled students. Four years later, the 1998 HEA reauthorization placed HSI's under Title V and narrowed the definition to accredited, degree-granting, public or private, non-profit colleges and universities with 25% or more total undergraduate full-time equivalent (FTE) Hispanic student enrollment (Laden, 2004, p. 186).

Emergence of HSIs in Texas

Hispanic-serving institutions (HSIs) generally share a very different history than do African-American and Native-American-serving institutions (Laden, 2004, p. 187). The latter institutions were often created for the very purpose of serving their distinct niche of the population. This is generally not the case for HSI's. These institutions are likely to have experienced demographic changes which have increased and maintained their Hispanic student populations beyond 25%. Laden asserts that the vast majority of Hispanic-serving institutions have emerged within the last 30 years due to a confluence of social, political, economic and demographic factors (Laden, 2004, p. 187). This phenomenon has occurred in specific geographic regions of the nation. Most Hispanic-serving institutions are located primarily around the perimeters of the country, from the Pacific Northwest, down the Pacific coast, along the Mexican border, up the Florida coast, along the Atlantic, and up into the tip of the Great Lakes on the northern border (Laden, 2004, p. 190-191).

A review of Laden's work raises three major questions regarding Hispanic-serving community colleges in Texas. Has demographic transition within the state increased the number of Hispanic-serving community colleges? Which public community colleges can be classified as HSI's in the broadest sense of the definition? Where are these community colleges located?

The Impact of Demographic Transition in Texas

Texas has experienced a dramatic increase in its Hispanic population both numerically and as a proportion of the entire population. Hispanics accounted for 32.0% of the Texas population in the 2000 Census. This is up from 25.5% in 1990 and 21.0% in 1980. Half of all Hispanics living in the US reside in just two states: California and Texas. California accounts for 11.0 million Hispanics while Texas accounts for 6.7 million (United States Bureau of the Census, 2000).

Texas community colleges have been impacted by changing demographics within the state; however, a review of data resources provided by the THECB no listing of Hispanic-serving community colleges. Identification of Hispanic-serving community colleges requires tabulation of enrollment data provided within the annual Statewide Factbook for Public Community, State and Technical Colleges. The percentage of Hispanic enrollment within each public community college can be calculated from the unduplicated number of students enrolled during each specific academic year by ethnicity and gender. These data exist for academic years 1997-98 through 2001-02.

A listing of the number of Hispanic-serving community college districts for each academic year is provided in Table 16. It is important to note that analysis of Hispanic enrollment is provided on a district-wide basis. Texas has a number of multi-campus and multi-college districts. It is entirely feasible that a community college district might not meet the definition of HSI while specific colleges within the district meet the criteria. Such is indeed the case within the Dallas County Community College District.

Table 16

Number of Hispanic-Serving Public Community College Districts in Texas

Academic Year	Number
1997-98	11
1998-99	11
1999-00	11
2000-01	13
2001-02	13

Obviously, the changing demographics of Texas are impacting the number of Hispanic-serving community colleges within the state. Examination of the 2001-02 data indicates that Dallas County Community College District included a Hispanic student population of 24.3%. This was up from 22.9% in 2000-01. It could be anticipated that the Dallas district will soon become the state's next Hispanic-serving community college district. Houston Community College could be next with a Hispanic enrollment of 23.6% in 2001-02. The predominate number of Hispanic-serving Texas community colleges were not generally designed as HSI's. Most have become HSI's as a result of the rapid growth of the Hispanic segment of the state's demography.

Hispanic-Serving Community Colleges in Texas

The thirteen community college districts which fit the broad definition of an HSI with their respective Hispanic enrollments for 2000-01 are Laredo Community College (95.4%), South Texas Community College (93.7%), El Paso Community College (74.8%), Southwest Texas Junior College (74.6%), Texas Southmost College (62.8%), Coastal Bend College (57.5%), Alamo Community College District (51.9%), Del Mar College (50.1%), Howard County Junior College (44.5%), Odessa College (40.9%),

Victoria College (28.4%), Midland College (25.6%) and San Jacinto College (25.2%). Laden's assertions regarding the location of Hispanic-serving institutions are also appropriate since most of these community colleges are located along the border areas of Texas. The anticipated inclusion of the urban Dallas and Houston community college districts as HSI's is also consistent with Laden's views regarding the rapidly growing urban Hispanic population. Texas does indeed mirror Laden's assertions regarding HSI's in regard to their history and location. It is of interest to note that TACC points out that 76% of the state's minority freshmen and sophomores attend community colleges (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 10).

Special Needs of Hispanic-Serving Community Colleges

Current literature suggests the need for expanded services for the recruitment and retention of Hispanic students. Hagedorn and Cepeda discuss the importance of additional supports to facilitate success (Hagedorn and Cepeda, 2004, p. 210). In an examination of factors relevant to the educational success of Hispanic students enrolled at Los Angeles Community College, these students were found to have entered college with lower high school GPA's. They were also less likely to have enrolled in advanced high school level math and science course. In addition, these students were much more likely to be employed on a full-time basis – yet another barrier to access to higher education. The importance of appropriate remedial services and coursework, student/faculty interaction and broad-based community involvement in the educational process are identified as important strategies to promote the success of Hispanic students (Hagedorn and Cepeda, 2004, p. 202-203). Hispanic-serving community colleges in Texas are likely to experience the additional burden of costs associated with these specialized programs

and services. For example, it is much more probable that HSI's will be required to maintain extensive English-as-a-Second Language (ESL) offerings than their counterparts with low Hispanic enrollment. Further, the recruitment and retention of minority faculty also becomes a cost issue for Hispanic-serving community colleges (Hagedorn and Cepeda, 2004, p. 210).

These community colleges are at the same time encountering decreased state funding while struggling to meet the increased need for specialized programming and services. Hendrick, Hightower and Gregory state the following in regard to state support of higher education.

> Recent national budget shortfalls have caused many states to evaluate various ways to cut their budgets – including cutting educational expenditures. (Hendrick, Hightower & Gregory, 2004).

Prah concurs with their observations by pointing out that higher education, once a "sacred cow," is no longer immune from the budgetary knife (Prah, 2003). The current funding environment holds the potential to limit student access. These budgetary declines may not only affect Hispanic-serving community colleges in Texas but may challenge the very core community college purpose of providing an open door for student access. Hendrick, Hightower and Gregory point out that the limitation of services may have become the norm within the current national community college system. In fact, the entire mission of the community college may be redefined if these trends are allowed to continue (Hedrick, Hightower and Gregory, 2004).

Hispanic-serving community colleges in Texas are experiencing similar financial constraints at a time when their services are desperately needed. The question arises as to whether or not Texas can afford to close the "open door."

Challenges Associated With Economic Crisis

Community colleges provide the gateway to a better life for many from the lower socio-economic ranks (Boswell & Wilson, 2004). The current economic downturn has negatively affected the availability and extent of the funding streams available to these institutions. Reduced funding challenges their ability to provide quality educational services to traditional and non-traditional constituents. Greer points out that the current scenario has placed community colleges in an untenable position.

> The constantly increasing cost of operating two-year community colleges in the United States is receiving increasing attention. Administrators are struggling to meet the costs of offering quality education accessible to citizens. Increasing enrollments at postsecondary education institutions, coupled with the expectation that the institutions will continue to serve the community within the constraints of their available resources, often results in choices that hinder the development of future programs and services. (Greer, 2004).

Additionally, community colleges find themselves in a competitive environment when seeking voter approval of bond measures to provide facilities and other services. Angstadt indicates that voters are more likely to fund their local school district than higher education (Angstadt, 2004). The denial of tax bond revenue can severely limit an institution's ability to meet the facility requirements generated by a rapidly increasing enrollment.

Dowd and Grant observe that the rhetoric of community colleges changed in the 1980s and 90s from a focus on equity to one of efficiency (Dowd & Grant, 2004). Burke notes the increase in the use of "incentive" or "performance-based" funding models as a means of supplanting enrollment-driven models (Burke & Associates, 2002). State appropriations experienced decline even as accountability was drawn to the forefront. As a result community colleges have become more dependent on local and external funding

sources (Merisotis & Wolanin, 2000).

Greer asserts that politics always seems to play a role in the allocation of scarce state resources and may account for inequities in the allocation of state funds. Greer further states that community college administrators often find themselves in the position of operating these institutions without appropriate resources. (Greer, 2004)

Texas Association of Community Colleges Legislative Priorities 2005

TACC has established two major legislative priorities for 2005. TACC is requesting that the 79th Legislature provide an additional $357.9 million to the community and technical college formula for FY 2006-07. TACC also requests that the 79th Legislature fully fund benefits for community and technical college faculty and staff. (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 2)

In regard to the first priority, TACC states that funding levels were reduced by the 78th Legislature in the amount of $59.8 million. The reduction occurred while community colleges were successfully meeting the goals of Closing the Gaps. It should be noted that the request for increased appropriations simply restores the state's contribution to 65% of the formula level. (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 3)

The report warns that the "open door" of access provided to the citizens of Texas may soon be closed due to decreased funding by the state. It clearly voices a warning concerning reduced access.

> Without relief from the Legislature, community colleges may have to start turning away students rather than adding more students.
>
> - Officials in California estimate that 175,000 students were not able to enroll in classes this past academic year due to budget constraints.

- In Florida, community colleges received a 7.2 percent increase in appropriations for the upcoming year. According to the Chancellor of the Florida Community College System, the increase will help the colleges catch up to the enrollment growth. (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 5)

It is not coincidental that TACC chose to discuss California and Florida, two states also struggling to meet the needs of an emerging Hispanic population.

The second legislative priority focuses on protecting employee benefits. TACC observes erosion in the state's funding of health insurance benefits. During the 78th Legislature an attempt was made to cease the state's funding of these benefits returning them to the local level. TACC clearly asserts that such is the responsibility of the state.

> TACC believes the state is responsible for providing group health insurance benefits to all employees involved with the educational program at our colleges. (Texas Association of Community Colleges Legislative Priorities 2005, 2004, p. 7)

The elimination of funding for employee benefits is viewed as yet another means of further decreasing state appropriations to community colleges.

Summary

Available literature suggests that Texas is faced with a rapidly changing demography. The Hispanic population is growing at a rate that may eventually cause it to become the majority ethnic group within Texas. Community colleges are of particular importance in meeting the goals of access and participation for this important segment of the state's population. Viable and stable funding is critical to their success.

CHAPTER 3

METHODOLOGY

Research Design

Analysis of the Texas community college revenue structure required the reduction of primary stream revenue into a standard unit of measurement. For purposes of this study all revenue sources were analyzed on a student contact hour basis to match the methodology utilized by the Texas legislature for the formula distribution of state appropriations.

The Texas Association of Community Colleges (TACC) has tracked student tuition rates and ad valorem property tax levies at the 50 community colleges districts since 1997-98. Though these data are self reported, they are standardized in format and may be equitably compared from year to year. TACC maintains an aggregate record by year of the cost for attending one of the 50 Texas community college districts based upon enrollment in a 12 semester hour course load per term including one lab fee and all other associated charges.

This study utilized TACC data in conjunction with information contained in the Texas Public Community and Technical Colleges 2002 Statewide Factbook (2003). Subsequently, this study made use of data for the 2000-01 academic year.

Data Set Design

A revenue-per-contact-hour data set was developed for comparative purposes for the five components contained within the revenue model in Figure 1 provided on page 9.

These components include 1) in-district tuition, 2) out-of-district tuition differentials, 3) out-of-state tuition differentials, 4) ad valorem tax levies, and 5) state appropriations. This data set was developed for all 50 community college districts and indicates the top ten Texas community colleges by percentage of Hispanic, African-American and Caucasian enrollments as calculated from the Texas Public Community and Technical Colleges 2002 Statewide Factbook (2003). These institutions are identified in Table 2 which is listed on page 5 of this study.

Student Tuition as a Primary Source of Revenue

TACC and Texas Higher Education Coordinating Board (THECB) data were combined to determine a per contact hour revenue rate for in-district, out-of-district and out-of-state student tuition. The TACC data provided a standardized cost for 12 semester credit hours of coursework for each of the three referenced tuition categories. TACC's standardized format overcomes differences in tuition structures for the state's 50 community college districts and provides the total tuition charges incurred by a student enrolling in 12 semester credit hours of coursework including one laboratory science course. The out-of-district tuition differential for 12 semester hours was determined by subtracting the in-district tuition rate from the out-of-district rate. The out-of-state tuition differential was determined by subtracting the out-of-district tuition rate from the out-of-state tuition rate. Each tuition category was then divided by 12 to produce a rate per semester hour

Per-semester-hour tuition rates were reduced to per-contact-hour tuition rates through the utilization of data obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook (2003, pp. vii-29, vii-15,vii-19). The reduction to per-

contact-hour amounts required the calculation of average contact hours per semester hour for each community college district. The total credit contact hours were obtained by subtracting the number of continuing education contact hours from the total contact hours. The average contact hour per semester hour for each community college was obtained by dividing the total credit contact hours by the number of semester credit hours. It is of note that the average contact hour per semester hour differs for the fifty community college districts due to differences in ratios of academic and technical education programming.

Tuition rates per contact hour were obtained by dividing the per semester hour in-district tuition, out-of-district tuition differential and out-of-state tuition differential by the average contact hours per semester hour for each institution. Formula calculations by tuition category are as follows:

> In-District Tuition per Contact Hour = (Total In-District Tuition for 12 Semester Hours Divided by 12 Semester Hours) Divided by the Average Contact Hours per Semester Hour
>
> Out-of-District Tuition Differential per Contact Hour = ((Total Out-of-District Tuition for 12 Semester Hours Minus the Total In-District Tuition for 12 Semester Hours) Divided by 12 Semester Hours) Divided by the Average Contact Hours per Semester Hour
>
> Out-of-State Tuition Differential per Contact Hour = ((Total Out-of-State Tuition for 12 Semester Hours Minus the Total Out-of-District Tuition for 12 Semester Hours) Divided by 12 Semester Hours) Divided by the Average Contact Hours per Semester Hour

Ad Valorem Property Taxes as a Primary Source of Revenue

As previously noted, community colleges were established within designated taxing districts. Ad valorem property tax revenues are assessed to provide facilities for citizens of these taxing districts. Students residing outside the taxing districts are assessed an out-of-district differential in addition to regular in-district tuition since they

do not pay ad valorem property taxes. Ad valorem property tax revenues per contact hour therefore are allocated to only those contact hours generated by in-district students.

TACC tracks ad valorem tax levies to include both standard maintenance and operation (M&O) revenue and tax bond revenue (TACC, 2003). The total tax levy, including M&O and bonded indebtedness, was divided by the total number of in-district contact hours to obtain the property tax revenue per in-district contact hour. The total number of in-district contact hours can be found in the Texas Public Community and Technical Colleges 2002 Statewide Factbook (2003, pp. vii-23). The following formula was utilized to produce the ad valorem property tax revenue per in-district contact hour:

> Ad Valorem Property Tax Revenue per In-District Contact Hour = Total M&O Tax Levy Divided by the 2000-01 In-District Contact Hours

State Appropriations as a Primary Source of Revenue

State appropriations are allocated on a per contact hour basis. Differences in funding rates per contact hour are accounted for by variations in programming costs which are based upon state-wide instructional cost studies conducted by the THECB. The allocation formula pro-rates the instructional costs for utilization by the legislature in determining the amount of state reimbursement. Under this system high cost instructional programs are awarded a higher rate of reimbursement. For example, contact hours in associate degree nursing programs are reimbursed at a higher rate than contact hours in mathematics since the instructional costs for the delivery of an associate degree nursing program are higher than those for delivering instruction in mathematics.

The total state appropriation for each college was divided by the number of funded contact hours to obtain the average state appropriations per contact hour. State appropriation amounts were obtained from TACC (TACC, 2003). State funded contact

hours were obtained from the Texas Public Community and Technical Colleges 2002 Statewide Factbook (2003, pp. vii-3). The following formula was utilized to produce the state appropriation revenue per contact hour:

> State appropriation revenue per contact hour = Total 2000-01 State Appropriations Divided by the 2000-01 Funded Contact Hours

Data Analysis

Statistical Packages for the Social Sciences (SPSS) was utilized to conduct multiple-factor analysis of variance (ANOVA) on the data set to examine differences among the several variables. The statistical testing utilized a significance level of 0.05. Post hoc tests were performed where necessary to address the research questions identified in Chapter 1.

CHAPTER 4

PRESENTATION OF FINDINGS

Data Set

This chapter presents the analysis and interpretation of student tuition, ad valorem property taxes and state appropriations as primary sources of revenue for the 50 Texas community college districts and the extent to which differences in funding exist. These primary revenue streams were analyzed and interpreted by percentage of Hispanic, African-American, and Caucasian student enrollments.

Student Tuition as a Primary Revenue Source

Table 17 presents the initial reduction of student tuition categories to a per semester amount. The three columns on the far right provide the in-district tuition revenue per semester hour, the out-of-district tuition differential per semester hour, and the out-of-state tuition differential per semester hour.

The average number of contact hours per semester hour is calculated in Table 18. As previously noted, this number varies by institution due to differences in instructional programming.

Tuition revenue amounts per semester hour are reduced to revenue amounts per contact hour as indicated in Table 19.

Table 17

Tuition Revenue per Semester Hour by Classification

College	ID Tuition	OD Tuition	OS Tuition	OD Differential	OS Differential	ID/Sem Hr	OD/ Sem Hr	OS/ Sem Hr
Alamo	$417	$681	$1,233	$264	$552	$34.75	$22.00	$46.00
Alvin	338	506	914	168	408	28.17	14.00	34.00
Amarillo	321	429	771	108	342	26.75	9.00	28.50
Angelina	273	369	561	96	192	22.75	8.00	16.00
Austin	543	1,083	2,019	540	936	45.25	45.00	78.00
Blinn	514	658	1,630	144	972	42.83	12.00	81.00
Brazosport	293	437	1,037	144	600	24.42	12.00	50.00
Central Texas	372	432	920	60	488	31.00	5.00	40.67
Cisco	485	557	710	72	153	40.42	6.00	12.75
Clarendon	399	471	555	72	84	33.25	6.00	7.00
Coastal Bend	364	568	616	204	48	30.33	17.00	4.00
College of the Mainland	220	409	589	189	180	18.33	15.75	15.00
Collin	336	432	852	96	420	28.00	8.00	35.00
Dallas	281	521	881	240	360	23.42	20.00	30.00
Del Mar	419	539	779	120	240	34.92	10.00	20.00
El Paso	551	551	762	211	0	45.92	17.58	$0.00
Frank Phillips	$442	$526	$586	$84	$60	$36.83	$7.00	5.00

(table continues)

Table 17 (continued)

College	ID Tuition	OD Tuition	OS Tuition	OD Differential	OS Differential	ID/Sem Hr	OD/ Sem Hr	OS/ Sem Hr
Galveston	$335	$335	$599	$0	$264	$27.92	$0.00	$22.00
Grayson	404	476	908	72	432	33.67	6.00	36.00
Hill	416	512	712	96	200	34.67	8.00	16.67
Houston	444	732	1,332	288	600	37.00	24.00	50.00
Howard	447	565	755	118	190	37.25	9.83	15.83
Kilgore	387	651	843	264	192	32.25	22.00	16.00
Laredo	436	700	1,036	264	336	36.33	22.00	28.00
Lee	293	485	605	192	120	24.42	16.00	10.00
McLennan	504	564	1,224	60	660	42.00	5.00	55.00
Midland	408	432	672	24	240	34.00	2.00	20.00
Navarro	406	550	759	144	209	33.83	12.00	17.42
North Central	360	504	792	144	288	30.00	12.00	24.00
North Harris Montgomery	372	852	972	480	120	31.00	40.00	10.00
Northeast Texas	430	562	730	132	168	35.83	11.00	14.00
Odessa	419	515	665	96	150	34.92	8.00	12.50
Panola	372	612	732	240	120	31.00	20.00	10.00
Paris	426	606	942	180	336	35.50	15.00	28.00
Ranger	$447	$457	$493	$10	$36	$37.25	$0.83	$3.00

(table continues)

Table 17 (continued)

College	ID Tuition	OD Tuition	OS Tuition	OD Differential	OS Differential	ID/Sem Hr	OD/ Sem Hr	OS/ Sem Hr
San Jacinto	$274	$442	$802	$168	$360	$22.83	$14.00	$30.00
South Plains	436	556	748	120	192	36.33	10.00	16.00
South Texas	630	739	1,385	109	646	52.50	9.08	53.83
Southwest Texas	382	484	922	102	438	31.83	8.50	36.50
Tarrant	447	591	1,791	144	1,200	37.25	12.00	100.00
Temple	480	744	1,416	264	672	40.00	22.00	56.00
Texarkana	320	452	696	132	244	26.67	11.00	20.33
Texas Southmost	742	970	3,526	228	2,556	61.83	19.00	213.00
Trinity Valley	238	394	814	156	420	19.83	13.00	35.00
Tyler	337	517	637	180	120	28.08	15.00	10.00
Vernon	384	540	960	156	420	32.00	13.00	35.00
Victoria	360	480	1,320	120	840	30.00	10.00	70.00
Weatherford	404	500	1,076	96	576	33.67	8.00	48.00
Western Texas	429	489	549	60	60	35.75	5.00	5.00
Wharton	$342	$570	$1,038	$228	$468	$28.50	$19.00	$39.00

Source: Texas Association of Community Colleges (ID Tuition/OD Tuition/OS Tuition)

Table 18

Average Contact Hours per Semester Hour

College	Total Contact Hrs	CED Cont Hrs	Total Credit Cont Hrs	Semester Credit Hrs	Avg ContHsr/ SemHr
Alamo	15,734,229	545,913	15,188,316	778,424	19.5
Alvin	2,094,909	113,593	1,981,316	86,686	22.9
Amarillo	4,284,572	701,695	3,582,877	155,816	23.0
Angelina	2,121,034	266,586	1,854,448	91,205	20.3
Austin	10,377,655	359,471	10,018,184	521,534	19.2
Blinn	5,525,297	42,586	5,482,711	283,536	19.3
Brazosport	1,588,327	50,226	1,538,101	66,244	23.2
Central Texas	4,469,435	367,819	4,101,616	185,329	22.1
Cisco	1,182,819	7,875	1,174,944	57,927	20.3
Clarendon	423,046	12,534	410,512	20,471	20.1
Coastal Bend	1,905,006	183,487	1,721,519	73,414	23.4
College of the Mainland	1,697,316	252,056	1,445,260	67,055	21.6
Collin	5,903,307	350,710	5,552,597	254,241	21.8
Dallas	22,966,037	2,297,201	20,668,836	961,639	21.5
Del Mar	4,792,844	304,562	4,488,282	197,911	22.7
El Paso	8,706,280	791,774	7,914,506	367,412	21.5
Frank Phillips	642,812	94,684	548,128	24,084	22.8
Galveston	1,258,326	229,600	1,028,726	42,068	24.5
Grayson	1,596,095	102,585	1,493,510	69,580	21.5
Hill	1,310,271	54,455	1,255,816	50,076	25.1
Houston	17,075,237	2,061,556	15,013,681	719,600	20.9
Howard	2,095,891	855,278	1,240,613	51,503	24.1
Kilgore	2,742,359	728,331	2,014,028	91,603	22.0
Laredo	3,278,332	291,114	2,987,218	147,261	20.3
Lee	2,745,300	98,615	2,646,685	120,216	22.0
McLennan	2,888,708	159,673	2,729,035	127,612	21.4
Midland	2,205,441	184,241	2,021,200	95,535	21.2

(table continues)

Table 18 (continued)

College	Total Contact Hrs	CED Cont Hrs	Total Credit Cont Hrs	Semester Credit Hrs	Avg ContHsr/ SemHr
Navarro	2,285,846	145,574	2,140,272	96,668	22.1
North Central	1,992,252	32,292	1,959,960	100,060	19.6
North Harris Montgomery	10,625,298	526,674	10,098,624	489,793	20.6
Northeast Texas	898,102	37,564	860,538	42,970	20.0
Odessa	2,223,111	200,765	2,022,346	88,350	22.9
Panola	872,073	40,631	831,442	36,482	22.8
Paris	1,702,545	92,039	1,610,506	63,005	25.6
Ranger	454,074	7,642	446,432	21,205	21.1
San Jacinto	9,274,017	503,512	8,770,505	418,148	21.0
San Jacinto	9,274,017	503,512	8,770,505	418,148	21.0
South Plains	3,437,452	92,704	3,344,748	160,035	20.9
South Texas	5,271,958	156,622	5,115,336	249,519	20.5
Southwest Texas	1,655,319	85,879	1,569,440	76,524	20.5
Tarrant	10,802,334	482,298	10,320,036	537,719	19.2
Temple	1,576,995	91,423	1,485,572	67,343	22.1
Texarkana	2,206,893	476,975	1,729,918	74,088	23.3
Texas Southmost	3,102,407	105,387	2,997,020	149,710	20.0
Trinity Valley	2,693,380	32,084	2,661,296	113,628	23.4
Tyler	4,122,717	215,986	3,906,731	186,659	20.9
Vernon	1,355,140	307,292	1,047,848	45,355	23.1
Victoria	1,920,243	155,995	1,764,248	80,095	22.0
Weatherford	1,486,592	217,034	1,269,558	58,829	21.6
Western Texas	667,553	113,137	554,416	24,464	22.7
Trinity Valley	2,693,380	32,084	2,661,296	113,628	23.4
Wharton	2,143,039	92,765	2,050,274	103,326	19.8

Source: Texas Public Community and Technical Colleges 2002 Statewide Factbook

Table 19

Tuition Revenue per Contact Hour by Tuition Classification

College	ID/Sem Hr	OD/ Sem Hr	OS/ Sem Hr	Average Cont Hrs/ Semester Hr	ID/ Cont Hr	OD/ Cont Hr	OS/ Cont Hr
Alamo	$34.75	$22.00	$46.00	19.5	$1.78	$1.13	$2.36
Alvin	28.17	14.00	34.00	22.9	1.23	0.61	1.49
Amarillo	26.75	9.00	28.50	23.0	1.16	0.39	1.24
Angelina	22.75	8.00	16.00	20.3	1.12	0.39	0.79
Austin	45.25	45.00	78.00	19.2	2.36	2.34	4.06
Blinn	42.83	12.00	81.00	19.3	2.22	0.62	4.19
Brazosport	24.42	12.00	50.00	23.2	1.05	0.52	2.15
Central Texas	31.00	5.00	40.67	22.1	1.40	0.23	1.84
Cisco	40.42	6.00	12.75	20.3	1.99	0.30	0.63
Clarendon	33.25	6.00	7.00	20.1	1.66	0.30	0.35
Coastal Bend	30.33	17.00	4.00	23.4	1.29	0.72	0.17
College of the Mainland	18.33	15.75	15.00	21.6	0.85	0.73	0.70
Collin	28.00	8.00	35.00	21.8	1.28	0.37	1.60
Dallas	23.42	20.00	30.00	21.5	1.09	0.93	1.40
Del Mar	34.92	10.00	20.00	22.7	1.54	0.44	0.88
El Paso	$45.92	$17.58	$0.00	21.5	$2.13	$0.00	$0.82
Frank Phillips	$36.83	$7.00	$5.00	22.8	$1.62	$0.31	$0.22
Galveston	27.92	0.00	22.00	24.5	1.14	0.00	0.90
Grayson	33.67	6.00	36.00	21.5	1.57	0.28	1.68
Hill	34.67	8.00	16.67	25.1	1.38	0.32	0.66
Houston	37.00	24.00	50.00	20.9	1.77	1.15	2.40
Howard	37.25	9.83	15.83	24.1	1.55	0.41	0.66
Kilgore	32.25	22.00	16.00	22.0	1.47	1.00	0.73
Laredo	36.33	22.00	28.00	20.3	1.79	1.08	1.38
Lee	24.42	16.00	10.00	22.0	1.11	0.73	0.45
McLennan	42.00	5.00	55.00	21.4	1.96	0.23	2.57
Midland	34.00	2.00	20.00	21.2	1.61	0.09	0.95
Navarro	33.83	12.00	17.42	22.1	1.53	0.54	0.79

(table continues)

Table 19 (continued)

College	ID/Sem Hr	OD/ Sem Hr	OS/ Sem Hr	Average Cont Hrs/ Semester Hr	ID/ Cont Hr	OD/ Cont Hr	OS/ Cont Hr
North Central	30.00	12.00	24.00	19.6	1.53	0.61	1.23
North Harris Montgomery	31.00	40.00	10.00	20.6	1.50	1.94	0.49
Northeast Texas	35.83	11.00	14.00	20.0	1.79	0.55	0.70
Odessa	34.92	8.00	12.50	22.9	1.53	0.35	0.55
Panola	$31.00	$20.00	$10.00	22.8	$1.36	$0.88	$0.44
Paris	$35.50	$15.00	$28.00	25.6	$1.39	$0.59	$1.10
Ranger	37.25	0.83	3.00	21.1	1.77	0.04	0.14
San Jacinto	22.83	14.00	30.00	21.0	1.09	0.67	1.43
South Plains	36.33	10.00	16.00	20.9	1.74	0.48	0.77
South Texas	52.50	9.08	53.83	20.5	2.56	0.44	2.63
Southwest Texas	31.83	8.50	36.50	20.5	1.55	0.41	1.78
Tarrant	37.25	12.00	100.00	19.2	1.94	0.63	5.21
Temple	40.00	22.00	56.00	22.1	1.81	1.00	2.54
Texarkana	26.67	11.00	20.33	23.3	1.14	0.47	0.87
Texas Southmost	61.83	19.00	213.00	20.0	3.09	0.95	10.64
Trinity Valley	19.83	13.00	35.00	23.4	0.85	0.56	1.49
Tyler	28.08	15.00	10.00	20.9	1.34	0.72	0.48
Vernon	32.00	13.00	35.00	23.1	1.39	0.56	1.51
Victoria	30.00	10.00	70.00	22.0	1.36	0.45	3.18
Weatherford	33.67	8.00	48.00	21.6	1.56	0.37	2.22
Western Texas	35.75	5.00	5.00	22.7	1.58	0.22	0.22
Wharton	$28.50	$19.00	$39.00	19.8	$1.44	$0.96	$1.97
				Average =	$1.55	$0.60	$1.58

Source: Table 17 and Table 18

Ad Valorem Property Taxes as a Primary Source of Revenue

Table 20 reveals that Texas community colleges have a wide range of ad valorem property tax revenue per in-district contact hour with amounts ranging from a low of $0.40 at Texarkana to a high of $7.71 at College of the Mainland.

Table 20

Ad Valorem Property Tax Revenue per In-District Contact Hour

College	M&O Total Levy	In-Dist Cont Hrs	TxRev/ID CHr
Alamo	$50,669,823	14,737,136	$3.44
Alvin	5,692,017	1,489,580	3.82
Amarillo	9,296,569	3,927,230	2.37
Angelina	2,569,030	1,780,326	1.44
Austin	19,318,043	9,675,022	2.00
Blinn	796,763	1,259,196	0.63
Brazosport	4,571,032	1,530,659	2.99
Central Texas	5,022,346	2,947,675	1.70
Cisco	202,135	352,997	0.57
Clarendon	248,364	210,468	1.18
Coastal Bend	786,478	838,004	0.94
College of the Mainland	12,599,538	1,633,510	7.71
Collin	34,216,447	5,567,367	6.15
Dallas	58,700,680	22,051,547	2.66
Del Mar	21,365,854	4,545,815	4.70
El Paso	23,247,689	8,554,655	2.72
Frank Phillips	1,013,573	552,539	1.83
Galveston	4,850,826	1,251,190	3.88
Grayson	3,850,981	1,432,644	2.69
Hill	$638,502	546,485	$1.17
Houston	$50,389,809	13,349,294	$3.77
Howard	2,774,850	720,966	3.85

(table continues)

Table 20 (continued)

Kilgore	2,835,887	1,818,864	1.56
Laredo	8,214,694	3,225,116	2.55
Lee	12,224,219	1,825,482	6.70
McLennan	6,880,459	2,843,380	2.42
Midland	7,422,009	2,068,025	3.59
Navarro	1,924,235	1,404,835	1.37
North Central	1,246,634	706,735	1.76
North Harris Montgomery	38,207,376	10,611,478	3.60
Northeast Texas	2,558,710	861,750	2.97
Odessa	8,011,111	2,049,095	3.91
Panola	2,813,547	637,148	4.42
Paris	1,623,115	1,258,075	$1.29
Ranger	148,249	242,580	0.61
San Jacinto	29,239,594	8,934,728	3.27
South Plains	4,703,614	2,011,734	2.34
South Texas	12,465,283	5,271,958	2.36
Southwest Texas	517,806	810,926	0.64
Tarrant	70,416,571	10,089,598	6.98
Temple	3,965,733	1,358,349	2.92
Texarkana	705,774	1,751,270	0.40
Texas Southmost	6,296,480	3,053,578	2.06
Trinity Valley	2,875,654	1,465,491	1.96
Tyler	7,271,155	3,761,823	1.93
Vernon	$1,787,397	478,719	$3.73
Victoria	4,729,241	1,612,449	2.93
Weatherford	4,149,223	1,193,180	3.48
Western Texas	$1,993,206	463,217	$4.30
Wharton	$2,653,141	1,030,846	$2.57
		AVERAGE =	$2.77

Source: Texas Association of Community Colleges and Texas Public Community and Technical Colleges 2002 Statewide Factbook

State Appropriations as a Primary Source of Revenue

Table 21 shows the average state appropriation revenues per contact hour for each of the Texas community colleges.

Table 21

State Appropriations per Funded Contact Hour

College	State Appropriations	Total Fnd Cont Hrs	Appr/IS Cont Hr
Alamo	$54,979,755	15,734,229	$3.49
Alvin	7,869,244	2,094,909	3.76
Amarillo	16,096,203	4,284,572	3.76
Angelina	7,661,718	2,121,034	3.61
Austin	36,577,930	10,377,655	3.52
Blinn	18,521,165	5,525,297	3.35
Brazosport	5,388,811	1,588,327	3.39
Central Texas	17,979,388	4,469,435	4.02
Cisco	4,368,082	1,182,819	3.69
Clarendon	2,125,000	423,046	5.02
Coastal Bend	6,875,645	1,905,006	3.61
College of the Mainland	$6,446,354	1,697,316	$3.80
Collin	18,510,745	5,903,307	3.14
Dallas	79,255,211	22,966,037	3.45
Del Mar	18,590,649	4,792,844	3.88
El Paso	33,459,456	8,706,280	3.84
Frank Phillips	2,452,997	642,812	3.82
Grayson	6,297,915	1,596,095	3.95
Hill	5,046,201	1,310,271	3.85
Houston	61,609,925	17,075,237	3.61
Howard	9,146,887	2,095,891	4.36
Kilgore	9,835,697	2,742,359	3.59
Laredo	13,003,047	3,278,332	3.97
Lee	11,306,731	2,745,300	4.12
McLennan	11,746,262	2,888,708	4.07

(table continues)

Table 21 (continued)

College	State Appropriations	Total Fnd Cont Hrs	Appr/IS Cont Hr
Midland	8,542,852	2,205,441	3.87
Navarro	7,268,781	2,285,846	3.18
Houston	61,609,925	17,075,237	3.61
Howard	9,146,887	2,095,891	4.36
Kilgore	9,835,697	2,742,359	3.59
Laredo	13,003,047	3,278,332	3.97
Lee	11,306,731	2,745,300	4.12
McLennan	11,746,262	2,888,708	4.07
Midland	8,542,852	2,205,441	3.87
Navarro	7,268,781	2,285,846	3.18
North Central	6,152,680	1,992,252	3.09
North Harris Montgomery	32,931,541	10,625,298	3.10
Northeast Texas	3,913,783	898,102	4.36
Odessa	8,882,059	2,223,111	4.00
Panola	3,660,701	872,073	4.20
Paris	6,856,779	1,702,545	4.03
Ranger	2,125,000	454,074	4.68
San Jacinto	$32,560,175	9,274,017	$3.51
South Plains	$12,661,581	3,437,452	$3.68
South Texas	17,275,287	5,271,958	3.28
Southwest Texas	6,230,610	1,655,319	3.76
Tarrant	39,420,190	10,802,334	3.65
Temple	5,652,863	1,576,995	3.58
Texarkana	8,623,352	2,206,893	3.91
Texas Southmost	11,955,891	3,102,407	3.85
Trinity Valley	9,847,441	2,693,380	3.66
Tyler	15,463,131	4,122,717	3.75
Vernon	5,031,674	1,355,140	3.71
Victoria	7,301,420	1,920,243	3.80
Weatherford	4,950,642	1,486,592	3.33

(table continues)

Table 21 (continued)

College	State Appropriations	Total Fnd Cont Hrs	Appr/IS Cont Hr
Western Texas	2,882,014	667,553	4.32
Wharton	$7,912,501	2,143,039	$3.69
		Average =	$3.77

Source: Texas Association of Community Colleges and Texas Public Community and Technical Colleges 2002 Statewide Factbook

Table 22 compares revenue per contact hour for the in-district tuition, out-of-district tuition differential, out-of-state tuition differential, ad valorem property taxes and state appropriations utilizing Ethnic Classifications identified in Table 2. Texarkana College was listed twice since it is classified, for purposes of this study, as both African-American and Caucasian-serving. This institution was only counted only once.

Table 22

Revenue per Contact Hour

College	Ethnic Classification	ID/ Cont Hr	OD/ Cont Hr	OS/ Cont Hr	TxRev/ID Cont Hr	State App/ Cont Hr
Alamo	Hispanic	$1.78	$1.13	$2.36	$3.44	$3.49
Alvin		1.23	0.61	1.49	3.82	3.76
Amarillo	Caucasian	1.16	0.39	1.24	2.37	3.76
Angelina		1.12	0.39	0.79	1.44	3.61
Austin		2.36	2.34	4.06	2.00	3.52
Blinn	Caucasian	2.22	0.62	4.19	0.63	3.35
Brazosport		1.05	0.52	2.15	2.99	3.39
Central Texas	African-American	1.40	0.23	1.84	1.70	4.02
Cisco		1.99	0.30	0.63	0.57	3.69
Clarendon	Caucasian	1.66	0.30	0.35	1.18	5.02
Coastal Bend	Hispanic	1.29	0.72	0.17	0.94	3.61

(table continues)

Table 22 (continued)

College	Ethnic Classification	ID/ Cont Hr	OD/ Cont Hr	OS/ Cont Hr	TxRev/ID Cont Hr	State App/ Cont Hr
College of the Mainland	African-American	0.85	0.73	0.70	7.71	3.80
Collin		1.28	0.37	1.60	6.15	3.14
Dallas	African-American	$1.09	$0.93	$1.40	$2.66	$3.45
Del Mar	Hispanic	$1.54	$0.44	$0.88	$4.70	$3.88
El Paso	Hispanic	2.13	0.00	0.82	2.72	3.84
Frank Phillips		1.62	0.31	0.22	1.83	3.82
Galveston	African-American	1.14	0.00	0.90	3.88	3.60
Grayson	Caucasian	1.57	0.28	1.68	2.69	3.95
Hill	Caucasian	1.38	0.32	0.66	1.17	3.85
Houston	African-American	1.77	1.15	2.40	3.77	3.61
Howard	Hispanic	1.55	0.41	0.66	3.85	4.36
Kilgore	African-American	1.47	1.00	0.73	1.56	3.59
Laredo	Hispanic	1.79	1.08	1.38	2.55	3.97
Lee		1.11	0.73	0.45	6.70	4.12
McLennan		1.96	0.23	2.57	2.42	4.07
Midland		1.61	0.09	0.95	3.59	3.87
Navarro	African-American	$1.53	$0.54	$0.79	$1.37	$3.18
North Central	Caucasian	$1.53	$0.61	$1.23	$1.76	$3.09
North Harris Montgomery		1.50	1.94	0.49	3.60	3.10
Northeast Texas	Caucasian	1.79	0.55	0.70	2.97	4.36
Odessa	Hispanic	1.53	0.35	0.55	3.91	4.00
Panola	African-American	1.36	0.88	0.44	4.42	4.20
Paris	Caucasian	1.39	0.59	1.10	1.29	4.03
Ranger		1.77	0.04	0.14	0.61	4.68
San Jacinto		1.09	0.67	1.43	3.27	3.51

(table continues)

Table 22 (continued)

College	Ethnic Classification	ID/ Cont Hr	OD/ Cont Hr	OS/ Cont Hr	TxRev/ID Cont Hr	State App/ Cont Hr
South Plains		1.74	0.48	0.77	2.34	3.68
South Texas	Hispanic	2.56	0.44	2.63	2.36	3.28
Southwest Texas	Hispanic	1.55	0.41	1.78	0.64	3.76
Tarrant		1.94	0.63	5.21	6.98	3.65
Temple		1.81	1.00	2.54	2.92	3.58
Texarkana	African-American	1.14	0.47	0.87	0.40	3.91
Texarkana	Caucasian	$1.14	$0.47	$0.87	$0.40	$3.91
Texas Southmost	Hispanic	$3.09	$0.95	$10.64	$2.06	$3.85
Trinity Valley		0.85	0.56	1.49	1.96	3.66
Tyler	African-American	1.34	0.72	0.48	1.93	3.75
Vernon	Caucasian	1.39	0.56	1.51	3.73	3.71
Vernon	Caucasian	1.39	0.56	1.51	3.73	3.71
Victoria		1.36	0.45	3.18	2.93	3.80
Weatherford		1.56	0.37	2.22	3.48	3.33
Western Texas		1.58	0.22	0.22	4.30	4.32
Wharton		$1.44	$0.96	$1.97	$2.57	$3.69
	Average =	$1.55	$0.60	$1.58	$2.77	$3.77

Source: Table 19, Table 20, Table 21

Table 23 provides the descriptive statistics for the primary revenue streams by category.

Table 23

Primary Revenue Streams per Contact Hour for Texas Community Colleges 2000-01

Revenue Category	N	Range	Maximum	Minimum	Mean	Standard Deviation
In-District Tuition	50	$2.24	$3.09	$0.85	$1.56	$0.42
Out-of-District Differential	50	2.34	2.34	.0.00	0.60	0.43
Out-of-State Differential	50	10.50	10.64	0.14	1.59	1.70
Ad Valorem Tax Levy	50	7.31	7.71	0.40	2.82	1.65
State Appropriations	50	$1.93	$5.02	$3.09	$3.77	$0.38

Source: SPSS Descriptive Analysis

The average values indicated in Table 23 are integrated into the Texas community college funding model in Figure 2.

Figure 2. Texas revenue structure including derived averages per contact hour – 2000/01.

In-District Revenue Sources	**Out-of-District Revenue Sources**	**Out-of-State Revenue Sources**
State Appropriations = $3.77	State Appropriations = $3.77	Out-of-State Differential = $1.58
Ad Valorem Property Tax Revenue = $2.77	OD Differential = $0.60	OD Differential = $0.60
ID Tuition Revenue = $1.55	ID Tuition Revenue = $1.55	ID Tuition Revenue = $1.55

Source: Table 19, Table 20, Table 21

SPSS was utilized to conduct multiple-factor analysis of variance (ANOVA) on the data set. Differences among the several variables are presented in response to each research question. A Dunnett's T3 post hoc test was conducted where necessary since equal variances among the variables was not assumed. Four groupings were present in the data: Hispanic-serving, African-American-serving, and Caucasian-serving and Other institutions. "Other" refers to those institutions that were not included in the three identified ethnic classifications.

Examination of the Research Questions

Research Question 1

Research question 1 sought to identify the primary revenue sources and extent to which funding levels vary for Hispanic-serving public community colleges in Texas. Descriptive analysis of the primary funding sources follows for the ten community college districts included in the Hispanic-serving classification. These districts were Alamo Community College, Coastal Bend Community College, Del Mar Community College, El Paso Community College, Howard County Community College, Laredo Community College, Odessa Community College, Texas Southmost Community College and South Texas Community College.

Table 24

Primary Revenue per Contact Hour for Texas Hispanic-Serving Community Colleges 2000-01

Revenue Category	N	Range	Maximum	Minimum	Mean	Standard Deviation
In-District Tuition	10	$1.80	$3.09	$1.29	$1.88	$0.56
Out-of-District Differential	10	1.13	1.13	0.00	0.59	0.36
Our-of-State Differential	10	10.47	10.64	0.17	2.19	3.08
Ad Valorem Tax Levy	10	4.06	4.70	0.64	2.72	1.30
State Appropriations	10	$1.08	$4.36	$3.28	$3.80	$0.30

Source: SPSS Descriptive Analysis

In-district tuition per contact hour ranged from $3.09 at Texas Southmost Community College to a low of $1.29 at Coastal Bend Community College. The out-of-district tuition differential per contact hour ranged from $1.13 at Alamo Community College to $0.00 at El Paso Community College. The largest range ($10.47) was found in the out-of-state tuition differential which is $10.64 at Texas Southmost Community College and $0.17 at Coastal Bend Community College. The ad valorem tax levy per in-

district contact hour ranged from a high of $4.70 at Del Mar Community College to a low of $0.64 at Southwest Texas College. State appropriations per contact hour ranged from $4.36 at Howard County College to $3.28 at South Texas Community College.

Research Question 2

Research question 2 sought to identify the primary sources and extent to which funding levels vary for African-American-serving public community colleges in Texas. Descriptive analysis of the primary funding sources follows for the ten institutions included in the African-American-serving classification. These districts were Central Texas Community College, College of the Mainland, Dallas County Community College, Galveston Community College, Houston Community College, Kilgore College, Navarro Community College, Panola Community College, Texarkana Community College, and Tyler Community College.

Table 25

Primary Revenue per Contact Hour for Texas African-American-Serving Community Colleges 2000-01

Revenue Category	N	Range	Maximum	Minimum	Mean	Standard Deviation
In-District Tuition	10	$0.92	$1.77	$0.85	$1.31	$0.26
Out-of-District Differential	10	1.15	1.15	0.00	0.67	0.36
Out-of-State Differential	10	1.96	2.40	0.44	1.06	0.63
Ad Valorem Tax Levy	10	7.31	7.71	0.40	2.94	2.11
State Appropriations	10	$1.02	$4.20	$3.18	$3.71	$0.29

Source: SPSS Descriptive Analysis

In-district tuition per contact hour ranged from a high of $1.77 at Houston Community College to a low of $0.85 at College of the Mainland. Houston Community College posted the highest out-of-district tuition differential at $1.15 per contact hour while Galveston Community College was lowest at $0.00. Houston Community College

had the highest out-of-state tuition differential at $2.40. Panola Community College had the lowest at $0.44. The largest range ($7.31) was in the ad valorem tax levy per contact hour with a high of $7.71 at College of the Mainland and a low of $0.40 at Texarkana Community College. State appropriations ranged from $4.20 at Panola Community College to $3.18 at Navarro Community College.

Research Question 3

Research question 3 sought to identify the primary revenue sources and extent to which levels of funding vary for Caucasian-serving public community colleges in Texas. Descriptive analysis of the primary funding sources was provided in Table 26 for the ten institutions included in the Caucasian-serving classification. These districts were Amarillo Community College, Blinn Community College, Clarendon Community College, Grayson County Community College, Hill Community College, North Central Texas College, Northeast Texas Community College, Paris Community College, Texarkana Community College, and Vernon Community College.

Table 26

Primary Revenue per Contact Hour for Texas Caucasian-Serving Community Colleges 2000-01

Revenue Category	N	Range	Maximum	Minimum	Mean	Standard Deviation
In-District Tuition	10	$1.08	$2.22	$1.14	$1.52	$0.32
Out-of-District Differential	10	0.34	0.62	0.28	0.47	0.14
Our-of-State Differential	10	3.84	4.19	0.35	1.35	1.08
Ad Valorem Tax Levy	10	3.33	3.73	0.40	1.82	1.08
State Appropriations	10	$1.93	$5.02	$3.09	$3.90	$0.53

Source: SPSS Descriptive Analysis

In-district tuition ranged from a high of $2.22 at Blinn Community College to a low of $1.14 at Texarkana Community College. The smallest range ($0.34) found in any

of the three grouping occurred in the out-of-district tuition differential for the Caucasian-serving institutions. Blinn Community College was highest at $0.62, and Grayson County College was lowest at $0.28. The out-of-state tuition differential ranged from a high of $4.19 at Blinn Community College to a low of $0.35 at Clarendon Community College. The ad valorem tax levy per contact hour ranged from $3.73 at Vernon Community College to $0.40 at Texarkana Community College. Clarendon Community College posted the highest state appropriation rate at $5.02 per contact hour. North Central Texas College was lowest at $3.09.

Research Question 4

Research question 4 was stated as follows: "Do differences exist among primary revenue streams of Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas?" The hypothesis for this question may be stated in the null: "There is no significant difference among the primary revenue streams for Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas." SPSS was utilized to conduct multiple-factor analysis of variance (ANOVA) on the data set to examine differences among the variables.

Table 27 contains the descriptive analysis of the primary revenue streams identified by this study. Data for the study were broken into four ethnic categories: Hispanic-serving, African-American-serving, Caucasian-serving, and other. Those community college districts not identified as Hispanic-serving, African-American-serving or Caucasian-serving are classified as "other." Table 28 contains the ANOVA conducted on the data set.

Table 27

Descriptive Statistics for Texas Public Community Colleges by Ethnic Classification 2000-01

		N	Mean	Std. Dev.	Std. Err.	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
TUITID	Hispanic	10	1.88	0.56	0.18	1.48	2.28	1.29	3.09
	African-Am	10	1.31	0.26	0.08	1.12	1.50	0.85	1.77
	Caucasian	10	1.52	0.32	0.10	1.30	1.75	1.14	2.22
	Other	21	1.52	0.38	0.08	1.35	1.69	0.85	2.36
	Total	51	1.55	0.42	0.06	1.43	1.67	0.85	3.09
TUITOD	Hispanic	10	0.59	0.36	0.12	0.33	0.85	0.00	1.13
	African-Am	10	0.67	0.36	0.11	0.41	0.92	0.00	1.15
	Caucasian	10	0.47	0.14	0.04	0.37	0.57	0.28	0.62
	Other	21	0.63	0.56	0.12	0.37	0.89	0.04	2.34
	Total	51	0.60	0.43	0.06	0.48	0.72	0.00	2.34
TUITOS	Hispanic	10	2.19	3.08	0.97	-0.01	4.39	0.17	10.64
	African-Am	10	1.06	0.63	0.20	0.60	1.51	0.44	2.40
	Caucasian	10	1.35	1.08	0.34	0.58	2.12	0.35	4.19
	Other	21	1.65	1.33	0.29	1.04	2.25	0.14	5.21
	Total	51	1.58	1.68	0.24	1.11	2.05	0.14	10.64
TAX	Hispanic	10	2.72	1.30	0.41	1.79	3.65	0.64	4.70
	African-Am	10	2.94	2.11	0.67	1.43	4.45	0.40	7.71
	Caucasian	10	1.82	1.08	0.34	1.04	2.59	0.40	3.73
	Other	21	3.17	1.74	0.38	2.37	3.96	0.57	6.98
	Total	51	2.77	1.67	0.23	2.30	3.24	0.40	7.71

(table continues)

Table 27 (continued)

		N	Mean	Std. Dev.	Std. Err.	95% Confidence Interval for Mean		Min.	Max.
						Lower Bound	Upper Bound		
STATE APP	Hispanic	10	3.80	0.30	0.09	3.59	4.02	3.28	4.36
	African-Am	10	3.71	0.29	0.09	3.50	3.92	3.18	4.20
	Caucasian	10	3.90	0.53	0.17	3.53	4.28	3.09	5.02
	Other	21	3.71	0.37	0.08	3.55	3.88	3.10	4.68
	Total	51	3.77	0.38	0.05	3.66	3.87	3.09	5.02

Source: SPSS Descriptive Analysis

Table 28

Analysis of Variance Between Primary Revenue Streams of Texas Public Community Colleges by Ethnic Category 2000-01

		Sum of Squares	df	Mean Squares	F	Sig.
TUITID	Between Groups	1.700	3	0.567	3.693	0.018
	Within Groups	7.210	47	0.153		
	Total	8.910	50			
TUITOD	Between Groups	0.232	3	0.077	0.410	0.747
	Within Groups	8.857	47	0.188		
	Total	9.088	50			
TUITOS	Between Groups	7.048	3	2.349	0.820	0.489
	Within Groups	134.624	47	2.864		
	Total	141.672	50			
TAX	Between Groups	12.642	3	4.214	1.566	0.210
	Within Groups	126.495	47	2.691		
	Total	139.137	50			

(table continues)

Table 28 (continued)

		Sum of Squares	df	Mean Squares	F	Sig.
STATEAPP	Between Groups	0.289	3	0.096	0.668	0.576
	Within Groups	6.783	47	0.144		
	Total	7.073	50			

Source: SPSS ANOVA

The primary funding streams of out-of-district tuition differential, out-of-state tuition differential, ad valorem tax levy per in-district contact hour and state appropriations indicated no significant differences between groups by ethnicity. In-district tuition has an *F* of 3.693 with significance of 0.018 which is below .05. The null hypothesis was rejected. Significant difference was indicated between the primary revenue streams for Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas in the funding category of in-district tuition per contact hour. A test of homogeneity of variance was conducted and the results are contained within Table 29.

Table 29

Test of Homogeneity of Variance

	Levene Statistic	df1	df2	Sig.
TUITID	1.899	3	47	0.143
TUITOD	1.617	3	47	0.198
TUITOS	2.215	3	47	0.099
TAX	0.984	3	47	0.408
STATEAPP	0.569	3	47	0.638

Source: SPSS Test Homogeneity of Variance

The analysis indicated no significant difference in the variance within groups; however, the study utilized the Dunnett T3 Post Hoc test which does not require equal

variance since the out-of-state tuition differential had a significance of 0.099 which could be considered low. Results are provided in Table 30 for the analysis of in-district tuition by ethnic group.

Table 30

Dunnett T3 Post Hoc Test of In-District Tuition by Ethnic Category

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
TUITID	Hispanic	African-American	0.5720	0.19511	0.064
		Caucasian	0.3580	0.20340	0.431
		Other	0.3586	0.19512	0.390
	African-American	Hispanic	-0.5720	0.19511	0.064
		Caucasian	-0.2140	0.13027	0.497
		Other	-0.2134	0.11692	0.375
	Caucasian	Hispanic	-0.3580	0.20340	0.431
		African-American	0.2140	0.13027	0.497
		Other	0.0006	0.13029	1.000
	Other	Hispanic	-0.3586	0.19512	0.390
		African-American	0.2134	0.11692	0.375
		Caucasian	-0.0006	0.13029	1.000

Source: SPSS Post Hoc Analysis

The post hoc test indicated that the in-district tuition of Hispanic-serving and African-American-serving public community colleges in Texas differ at a significance level of 0.064. As noted in Table 27, the mean in-district tuition of the Hispanic-serving public community colleges was $1.88 per contact hour. The mean of the African-American serving public community colleges was $1.31 per contact hour

In summary, analysis of the data set indicated that significant difference does exist among groups for the primary revenue stream of in-district tuition. Post hoc

analysis indicated the in-district tuition revenue per contact hour for Hispanic-serving Texas public community colleges was statistically higher than that of their African-American-serving counterparts at a significance level of 0.064.

CHAPTER 5

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Summary of Findings

The four research questions which defined the study and a summary of findings follow.

1) What are the sources and extent of primary revenue for Hispanic-serving public community colleges in Texas?

The five average primary revenues per contact hour for the 2000-01 academic year for the top ten Texas public community college districts by percentage of Hispanic enrollment were: $1.88 for in-district tuition, $0.59 for the out-of-district tuition differential, $2.19 for the out-of-state tuition differential, $2.72 for ad valorem property tax revenue per in-district contact hour, and $3.80 for state appropriations.

2) What are the sources and extent of primary revenue for African-American-serving public community colleges in Texas?

The five average primary revenues per contact hour for the 2000-01 academic year for the top ten Texas public community college districts by percentage of African-American enrollment were: $1.31 for in-district tuition, $0.67 for the out-of-district tuition differential, $1.06 for the out-of-state tuition differential, $2.94 for ad valorem property tax revenue per in-district contact hour, and $3.71 for state appropriations.

3) What are the sources and extent of primary revenue for Caucasian-serving public community colleges in Texas?

The five average primary revenues per contact hour for the 2000-01 academic year for the top ten Texas public community college districts by percentage of Caucasian enrollment were: $1.52 for in-district tuition, $0.47 for the out-of-district tuition differential, $1.35 for the out-of-state tuition differential, $1.82 for ad valorem property tax revenue per in-district contact hour, and $3.90 for state appropriations.

4) Do differences exists between and among primary revenue streams of Hispanic-, African-American-, and Caucasian-serving public community colleges in Texas?

Analysis of the data revealed that in-district student tuition in 2000-01 was higher at the Hispanic-serving public community colleges in Texas than at their African-American-serving counterparts. No significant differences in in-district student tuition were identified in relation to Caucasian-serving institutions. No significant differences were identified for the out-of-district and out-of-state tuition differentials, ad valorem property tax revenues per in-district contact hour, or state appropriations by ethnic classification for public community colleges in Texas.

Discussion

Analysis of the 2000-01 primary revenue streams for Texas public community college districts revealed a number of interesting observations. These observations are predicated upon the assumption that public institutions are not operated for profit. In other words, public community college districts in Texas generate funding to meet the existing needs of the institutions. When the revenue of one district exceeds that of another, programming differences may be assumed to exist within the institutions which require variations in the funding sources.

Variations in the data revealed that institutions invariably differ in instructional programming, equipment, technology, facilities and facility maintenance. For example,

one institution may have chosen to defer facility maintenance as a short-term strategy to limit annual expenditures. Another may have implemented an aggressive capital asset replacement plan for the upgrade and replacement of facilities. Yet another may not have acquired appropriate levels of technology and instructional equipment. A fourth may have purchased state-of-the-art computer labs and cutting-edge technology infrastructure.

Political factors have also limited the availability of primary funding sources. The data clearly revealed that taxpayer willingness to implement levies in support of their local community college varied from one district to the next. These funding differences affect facility maintenance and operation as well as the ability of some community college districts to attract and retain a qualified faculty, staff and administration. Review of the Texas Association of Community College (TACC) website also revealed that the limited availability of state appropriations for community colleges has been subject to the prevailing political winds in Austin.

Hispanic-Serving Community Colleges

Analysis of the data indicated that in-district tuition rates for Hispanic-serving publicly community colleges were significantly higher than those of African-American institutions. The average in-district tuition per contact hour was $1.88. This amount surpassed that of all other institutional classifications with a mean of $1.31 at African-American-serving institutions and $1.52 at Caucasian-serving institutions. The result of higher in-district tuition is that out-of-district and out-of-state students are also paying more. The funding model illustrated in Figure 1 (page 9) demonstrates that out-of-district and out-of-state tuition differentials are combined with in-district tuition and state appropriations to generate the total charges for these respective classifications of

students. A higher rate of in-district tuition revenue per contact hour virtually ensures a higher tuition charge for out-of-district and out-of-state students as well since no differences were determined in regard to the out-of-district and out-of-state tuition differentials. The findings of this study demonstrate that in-district, out-of-district and out-of-state students attending Hispanic-serving public community colleges in Texas incurred higher tuition rates during the 2000-01 academic year. These higher tuition rates are, in all likelihood, a means of assisting Hispanic-serving public community colleges in providing the support mechanisms required to meet the needs of their Hispanic constituents as described by Hagedorn and Cepeda (2004).

Texas employs a formula based methodology for the distribution of state appropriations which is predicated upon the assumption that instructional costs are equivalent across institutions. This methodology is not student sensitive in terms of the comprehensive support services necessary to ensure student success. This attempt to promote equity, long deemed the methodology's greatest strength, may indeed be its greatest weakness. Hagedorn and Cepeda (2004) report that Hispanic students often require more extensive support mechanisms.

Because the methodology for allocating state appropriations does not adjust for these heightened revenue requirements, Hispanic-serving community colleges have been forced to turn to those primary revenue streams under their direct control to provide required services. These locally controlled revenues are student tuition and ad valorem property taxes. Since the study identified no differences in the ad valorem property tax revenues per in-district contact hour at the same time differences in in-district tuition were found to exist, it may be concluded that Hispanic students are paying increased rates

of tuition to fund the costs of the required enhancements to promote their academic success. There is no indication that ad valorem tax levies have been adjusted to compensate for these increased expenditures.

The higher tuition rates at Hispanic-serving institutions constitute cause for alarm. Educators have long viewed increased tuition costs as a limitation to student access to higher education. While the Texas higher education master plan, Closing the Gaps by 2015, specifically addresses the State's intent to meet the educational needs of the Hispanic population, the higher in-district tuition assessed students at the indicated Hispanic-serving institutions has created a paradoxical and unacceptable dilemma. Simply put, Hispanic-serving public community colleges have been forced to raise student tuition to provide expanded services and promote student success as delineated by the performance expectations of the Texas higher education master plan. These increases have limited the access of Hispanic students to higher education at a time when efforts at inclusion are of critical importance in securing the viability of the state's education master plan and, thus, its economic competitiveness.

A major flaw in the Texas higher education master plan becomes apparent. The plan includes no accountability mechanism to ensure legislative funding of the indicated initiatives. While institutions are held accountable, the state is not. In fact, historical review of levels of state appropriations presented by TACC could easily lead to the supposition that Closing the Gaps by 2015 is simply another of many unfunded state mandates.

Failure of the state to hold itself fiscally accountable has passed the cost of compliance on to local taxpayers and students. In the case of Hispanic-serving

institutions, the greatest portion of the burden has been placed upon the shoulders of Hispanic students and their families. It is inexcusable for Hispanic students to be forced to pay higher tuition to access the state's higher education system.

African-American-Serving Community Colleges

In regard to the lower in-district tuition costs assessed students at African-American-serving institutions, several questions are also relevant. What factors contribute to lower in-district tuition at African-American-serving institutions? Are these institutions providing the student support mechanisms necessary for student success? Is the short-fall in in-district tuition covered by other primary revenue sources?

The analysis provided no additional insight into the success or failure of African-American-serving public community colleges in Texas in providing the support mechanisms to promote student success. The analysis also indicated no differences in the remaining sources of primary revenue.

Conclusions

The study indicates that Hispanic-serving public community colleges in Texas are charging higher tuition rates. These higher rates, though likely intended to fund mechanisms to promote student success, serve to limit the access of Hispanic students to higher education. The following conclusions are drawn from the findings of this study.

1) Texas is experienced a dramatic increase in its Hispanic population which has burgeoned to 6.7 million according to the 2000 Census and accounted for 32.0% of the state's population. This percent is likely to increase to 39.2% by 2010.

2) Texas must meet the educational needs of its rapidly growing Hispanic population if the state is to retain its economic viability. Otherwise, Texas will become a more impoverished and less educated state with fewer opportunities for its people.

3) The number of Hispanic-serving community colleges in Texas continues to increase. In most cases, the state's Hispanic-serving community colleges were not designed as such but have emerged as a result of demographic change.

4) Hispanic-serving community colleges play a dominant role as educational providers to the state's Hispanic population and account for a significant number of certificates and degrees awarded to Hispanic students.

5) Hispanic-serving community colleges must provide enhanced support mechanisms to promote the academic success of Hispanic students. These expanded services include, but are not limited to, programs for the recruitment and retention of Hispanic students. The requirements of these programs often differ from those associated with other ethnic classifications and generally include broad-based community involvement in appropriate remedial services including English-as-a-Second Language and coursework along with extensive student-faculty interaction.

6) The recruitment and retention of qualified minority faculty by Hispanic-serving community colleges is critical to meeting the needs of Hispanic students and constitutes a major cost issue for these institutions.

7) Hispanic-serving community colleges require additional funding if they are to adequately support the expanded needs of Hispanic students and promote the academic success of this student population.

8) Formula allocation of state appropriations based upon assumptions of equity in the cost of instructional delivery often fails to compensate Hispanic-serving institutions for the additional expenditures required to promote the academic success of Hispanic students.

9) Additional costs are passed to local taxpayers and students when state appropriations fail to compensate for increased fiscal burdens faced by Hispanic-serving community colleges.

10) Local taxpayers vary in their willingness to provide ad valorem tax revenues in support of their local community colleges.

11) Hispanic students and their families are likely to experience increased tuition costs as the major means by which Hispanic-serving community colleges compensate for shortfalls in other primary revenues.

12) Hispanic students should only be assessed tuition rates that are equivalent to those of other ethnic classifications. Hispanic students in Texas should not be forced to pay more for access to higher education.

13) The Texas higher education master plan, Closing the Gaps by 2015, is flawed in that it does not provide fiscal accountability at the state level to promote inclusion of Hispanics in higher education.

Recommendations

The following recommendations are derived from the findings and conclusions of this study.

For Practice

1) The Texas Legislature, in conjunction with the Texas Higher Education Coordinating Board (THECB), should mandate state fiscal accountability in support of the goals and objectives stipulated in the Texas higher education master plan, Closing the Gaps by 2015.

2) The THECB should establish a research center for the study of Hispanic-serving community colleges in Texas. Sufficient grant funding should be allocated to facilitate analysis of the challenges these institutions face.

3) The THECB should establish a task force to examine the challenges faced by emerging Hispanic-serving community colleges and develop strategies to promote institutional and student success.

4) The formula allocation of state appropriations should be modified to compensate Hispanic-serving community colleges for the additional costs associated with serving Hispanic students.

For Further Study

1) It is recommended that additional research be conducted to examine the longitudinal relationship between and among the five primary Texas community college revenue streams.

2) It is recommended that a study examine the effects of the 2002-03 mid-year reduction in Texas community college appropriations on community college tuition rates and ad valorem tax revenues.

3) It is recommended that further historical research be conducted to analyze the number and nature of Hispanic-serving community colleges in Texas.

4) It is recommended that a study be undertaken to examine the special programming requirements of Hispanic-serving community colleges as compared to non-Hispanic-serving institutions.

5) It is recommended that a study identify the challenges facing emerging Hispanic-serving community colleges in Texas.

6) It is recommended that a study be undertaken to examine the impact of Hispanic-serving community colleges on Texas higher education graduation rates.

7) It is recommended that a longitudinal and/or historical studies be conducted to examine the amount and impact of federal funds provided Hispanic-serving community colleges in Texas.

8) It is recommended that a study be initiated to examine and contrast the opinions and views of community college and legislative leaders in regard to the Closing the Gaps by 2015 initiative.

9) It is recommended that a study identify best practices of Hispanic-serving institutions that result in student success.

10) It is recommended that a more detailed financial model be developed with the goal of analyzing the costs associated with the various programs and services utilized by Hispanic-serving community colleges.

11) It is recommended that this study be replicated in other contexts such as metropolitan vs. non-metropolitan public community colleges.

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