

Diversity and Gender Trends in Texas Community Colleges

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ABSTRACT

Diversity and gender trends of community college students in Texas from the 2000 to 2011 academic years were explored. Archived data retrieved from the Texas Higher Education Coordinating Board (THECB) were evaluated to determine the extent to which differences were present between ethnic groupings and/or gender across these academic years. The largest ethnic changes were present for Hispanic and White student groups. Hispanic enrollment increased by 13% whereas White matriculation decreased by 19%. In addition, gender differences remained static with more females than males attending community colleges. Policy implications for community college leaders are discussed.

Keywords: community colleges, higher education, diversity, gender, and trends Introduction

Introduction

A college education in the 21st century has become as important as a high school education in the 20th century. People who hold college degrees tend to obtain better paying jobs, and people from higher income families tend to enroll in college (Reid & Moore, 2008). President Barack Obama said that the rise in unemployment of those not obtaining a college degree was in part the cause of our current economic problems (Obama, 2010). Aside from the economic limitations that prevent matriculation to college are the academic limitations. Research studies to understand the gap between students who are likely to enroll in college and those students who are not likely to enroll in college proliferate. The federal government, under President George W. Bush, initiated actions to eliminate academic disparity among students in the No Child Left Behind Act (NCLB, 2002). In this act, states were required to develop academic standards and students were required to meet those standards before advancing to the next grade. Regardless of cultural or socioeconomic background, students were expected to obtain the standards in order to be more college ready. Since the inception of the NCLB (2002) the burden of preparing students for college admission, and subsequently a better career path, has fallen on educators.

Accountability data to measure the effectiveness of Texas state standards has burgeoned since the inception of NCLB. One way to gauge the effectiveness of a state's standards might be to determine if enrollment at postsecondary institutions has indeed increased. Accountability data are archived and easily available (THECB, 2012). An underlying assumption of the NCLB legislation was that standardized requirements at the high school level would increase student eligibility to college. Therefore, differences in student enrollment trends following the NCLB initiation might reveal NCLB's effectiveness in diminishing the achievement gap.

Providing social justice (Aragon & Brantmeier, 2009), and improving our nation's economy (Green, 2007) are compelling reasons to strive for collegiate ethnic diversity. In addition, some institutions have increased their number of international students to promote diversity as well as to increase financial resources (Ziadie, 2011). Economic globalization is an added benefit of campus diversity acknowledged by Green (2007).

Researchers (Gurin, Dey, Hurtado, & Gurin, 2002; Loes, Pascarella, & Umbach, 2012) have investigated the effects of diversity on critical thinking skills, and they have made compelling arguments for its positive effects. Sternberg (2008) argued that diversity and academic achievement were compatible goals. Others point to an increased need for multi-dimensional campus diversity to suppress religious discrimination because religion was a major defining element of ethnicity (Cole & Ahmadi, 2010).

In sum, ethnic diversity on college campuses has many benefits. Of particular interest to this study was whether admission enrollment demographics changed in the years since the NCLB took effect, and more importantly, whether those standards might have contributed to an increase of ethnic diversity. Community colleges were selected for the study because of their open door policy, affordability, and history of serving nontraditional, minority students (Aragon & Brantmeir, 2009).

Statement of the Problem

Ethnic diversity on college campuses was explained as a worthwhile goal for a number of reasons. Yet some researchers maintain a gap exists between the numbers of White students attending college versus Hispanic students, (Zarate & Burciago, 2010) and that Whites far outnumber Hispanics despite federal mandates encouraging more diversity. Indeed, Zarate and Burciago (2010) stated, "The result is a persistent and widening gap in college enrollment and attainment between Latinos and Whites. The college enrollment rate is exacerbated when comparing community college enrollment between Whites and Latinos" (p. 25). Research to discern whether such a gap existed in Texas community colleges was explored in this study.

In addition, gender differences in SAT scores have been identified (Combs et al., 2010; Nankervis, 2011). How well a student does on the SAT might be influenced by gender and thus could influence the number of males versus females attending colleges. Therefore, college admission trends related to gender would be of interest to study. If state standards of the NCLB Act were being met and students were achieving college readiness standards then disparities between female and male enrollments should not be apparent in community college admissions.

A secondary issue related to gender is of interest. At the onset of the 21st century, more females than males were attending college. Consequently, some colleges started to admit more males than females to make up for the inequity (Townsend, 2008). Community colleges have an open admission policy and cannot participate in selective admissions. Therefore, enrollment trends over the 12 years from community colleges might reveal any gender differences.

Research Questions

The following two research questions were explored in this quantitative study: (a) What were the differences among the number of first year, full time, community college students of various ethnic groups over the past 12 years in the state of Texas? and (b) What were the differences among the number of first year, full time, female and male, community college students over the past 12 years in the state of Texas?

Significance of the Study

The purpose of this study was to explore diversity and gender trends over the past 12 years for community colleges in Texas. A major assumption was that if mandates instituted by the federal government were successful in making students college ready, then community college enrollments could be expected to increase and students matriculating more ethnically diverse. Community colleges would be an especially good place to evaluate these trends because of open admission policies, low costs, and traditionally higher attendance by minority students.

Limitations of the Proposed Research

A limitation of this study was using only community college student data. Patterns across both 2-year and 4-year institutions would strengthen a view of trends across the state of Texas. In addition, only data pertinent to the state of Texas were analyzed so generalizations to a larger population outside of community colleges in Texas could not be made. Therefore, this analysis could not be used to infer about other states', national, or international trends.

Method

Participants

The participants in this study were first time, credential seeking, full time, first year, community college, students in Texas. First-time students were students who never attended or took college credit courses prior to enrollment. Credential seeking were students who sought to complete an Associate Degree or transfer to a 4-year institution for a Bachelor Degree. Full-time students were students taking a minimum of 12 credit hours of coursework a semester. First-year students were students regarded as freshmen. Community college students were those students attending 2-year rather than 4-year institutions. This student sample was retrieved from the Texas Higher Education Coordinating Board database (THECB, 2012) and were aggregated by seven ethnic categories: (a) African American (Black/AA), (b) Asian (AS), (c) Hispanic (HS), (d) Caucasian (White/WH), (e) International (IN), (f) Multiracial (MR), and (g) Other (OT). The Multiracial grouping was a recent development since 2010. Consequently, only two years of data were available for that category.

Selection Criteria

Archival data taken from the Texas Higher Education Coordinating Board (THECB, 2012) were retrieved for this study. The sequence of order prompts used to access the database were: database resources, Texas higher education data, accountability, interactive access to data, community colleges (i.e., Texas public - all), participation, key measures, contextual, first time in college full-time students. The years investigated spanned from 2000 to 2011. The 72 colleges in the database included the main and branch campuses from all districts in Texas. Several districts

aggregated their individual campuses into a central one and were included in the database. For example, Lone Star College System had its own column of figures while each individual campus (e.g., North Harris, Montgomery, and Cy-Fair) also had their own column of figures. The summated districts were eliminated to avoid redundancy of numbers (i.e., Alamo Community College, Dallas County Community College, Howard County Junior College, Lone Star College, San Jacinto College, and Tarrant County College).

Design Description

Descriptive analyses, using SPSS version 20 were conducted on all students by ethnic grouping, for 72 community college campus locations, across 12 years. The statistics included obtaining the mean, standard deviation, range, sum, maximum, minimum, skewness, and kurtosis coefficients for each ethnic grouping and gender. Difference calculations between the seven ethnic groups and genders were calculated for each year, and graphs depicting the changes were created using an Excel spreadsheet.

Analytical Procedure and Rationale

The THECB database of 72 community colleges across 12 years was transferred from Excel to SPSS for analysis. Graphs identifying each ethnic category from all 72 community colleges for 12 academic years (2000 - 2011) were developed. Difference values and percentages for each ethnic category were computed using Excel beginning with the academic year 2000 and ending with the academic year 2011 (see Figure 1). In addition, difference scores and percentages for changes between male and female students across the twelve years were computed using Excel (see Figure 2). The total number of students who attended community colleges in Texas, grouped by ethnicity was tabulated using SPSS and the results cataloged in Table 1. Difference rates between the academic years 2000 and 2011 for the various ethnic groupings are listed in Table 2. The number of students for each ethnic group divided by total students per year was calculated in percentages and cataloged in Table 3. Lastly, the number of female versus male students enrolled in Texas community colleges for each year, and their respective percentages, were calculated and displayed in Table 4.

Results

The overall numbers of first time, full-time students in Texas community colleges have increased from 50,224 in the year 2000 to 66,724 in the year 2011; a net increase of 16,500. Ethnic diversity increased for Hispanic (13%), Other (4%), Black (3%), and Multiracial (.29%) groups. No changes in the Asian student population were apparent. Decreases in two ethnic categories were revealed. The largest decrease of students was in the White ethnic category. Enrollment diminished for Whites by 19%. A modest decrease was discerned in International students who were down in numbers by 2% (-2%) since 2000. Difference rates of each ethnic category between each academic year from 2000 to 2011 indicated that the largest change in ethnic diversity since 2000 and 2001 occurred in the 2008 to 2009 academic years (See Table 2). Black, Asian, Hispanic, White, and Other students all increased enrollments. International students dropped substantially in 2008 to 2009 academic years and in 2009 to 2010 academic years. Despite mild fluctuations of increases and decreases between the genders across the years, the percentage of females and males attending community colleges in Texas was the same in 2000 as in 2011 as indicated by Table 3.

In summary, the greatest change of ethnic diversity was the increased number of Hispanic (13%) students attending community colleges and the decreased number of White (-19%) students attending community colleges. Modest increases were revealed in the remaining ethnic groups, with the exception of the International category, which had a mild decrease in numbers. More female students than male students have attended Texas community colleges throughout the 12 years studied and differences in the percentages between genders have remained the same.

Discussion

The numbers for different ethnic groups of first year, full-time students in community colleges in the state of Texas across 12 years were calculated in order to answer the first research question. The underlying assumption was that an increase would be present in diversity across all ethnic groups since NCLB was mandated. To this first question, an increase of Hispanic student (13%) enrollment and a decrease of White student matriculation (-19%) at community colleges was discovered. By studying these ethnic trends since the NCLB Act, it would appear that increased diversity particular to the Hispanic population was apparent. However, whether the increase was related to NCLB standards remains unknown. Nonetheless, the present study has evidence that the Hispanic population increased extensively during the years since NCLB was instituted in Texas. The diminishing number of White students from Texas community colleges might be the result of general population trends. Nonetheless, the number of White students enrolled statewide seems to be decreasing contrary to what some researchers (e.g., Zarate & Burciaga, 2010) have described. However, it would be interesting to compare the -19% difference rate (i.e., 27,035 White students in the 2000 academic year to 23,214 White students in the 2011 academic year) to census figures in Texas.

A relatively mild increase of Black, Other, and Multiracial ethnic categories paled in comparison to the Hispanic group. A higher increase of enrollment for all groups had been expected. The International population decrease of -2% was surprising. Current literature highlights opinions from researchers who value increasing the collegiate International population for social, cognitive, and financial gain (Green, 2007). Whereby this push may be more apparent at 4-year institutions, it was somewhat alarming that a decrease in the International population occurred rather than an increase.

To answer the second research question, differences between the number of males and females were compared. The data showed mild fluctuations in gender numbers between the 2000 and 2011 academic years. However, the percentage difference between males and female students was the same for the 2000 academic year as it was for the 2011 academic year. Surprisingly, no differences of gender trends since the implementation NCLB were revealed. If cognitive standards (e.g., ACT or SAT) continue to be the gold standard by which to achieve college admission, and high schools have equalized standards for minorities as well as for the genders through NCLB, some change in gender differences might have been expected.

In conclusion, diversity trends in community colleges for first year, full-time students in Texas have provided evidence that significant increases of enrollment for particularly Hispanic students has transpired. Perhaps, the NCLB law has contributed to the rise of the Hispanic population attending community colleges. However, an intriguing question remains as to what led to the diminishment of the White student population at community colleges. Some might speculate that White students attend community colleges far less often because they are financially able to matriculate at 4-year institutions. If that were the case, could we not have expected that trend to be consistent over a decade? The White student numbers were increasing until 2004, remained somewhat steady but an overall diminishment from 2004 to 2009, and recently decreased substantially in the years of 2010 and 2011 (See Table 1). Today, almost everyone is having financial difficulties because of a faltering economy. An increase of White enrollment would make more sense especially in light of the recent economic decline.

More research is necessary to understand these and other trends at community colleges. Administrators need to be aware of changes in trends and demographics to effect appropriate policies. A recommendation to include 4-year institutions of Texas in a similar analysis would add to the research. In particular, studies to determine reasons for the decreased number of White students attending community college in Texas would be of interest.

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Table 1

Number of First Time, Full-Time Students Enrolled at Community Colleges in Texas From 2000 to 2011 Academic Years Grouped by Ethnicity

Year	Black	Asian	Hispanic	White	International	Multiracial	Other	Total
2000	5,662	1,602	13,374	27,035	1,896	0	655	50,224
2001	6,689	1,820	15,691	30,245	2,342	0	930	57,717
2002	6,609	1,833	17,109	28,746	1,786	0	964	57,047
2003	7,237	1,683	19,934	30,582	1,297	0	899	61,632
2004	7,276	1,742	18,948	28,019	1,595	0	983	58,563
2005	7,300	1,709	18,240	26,752	1,182	0	967	56,150
2006	6,987	1,841	18,647	26,650	1,350	0	1,123	56,598
2007	7,464	1,959	19,178	27,117	1,318	0	1,258	58,294
2008	7,643	1,828	20,884	25,967	1,589	0	1,223	59,134
2009	8,922	2,046	24,875	27,528	1,368	0	1,332	66,071
2010	9,241	2,113	26,372	25,185	1,152	291	4,586	68,940
2011	9,473	2,189	26,912	23,214	1,145	472	3,319	66,724

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Table 2

Percent of Difference Rates for Ethnic Groups Attending Community Colleges in Texas Between the Academic Years 2000 and 2011

Year	Black	Asian	Hispanic	White	International	Multiracial	Other	Total
2000 -2001	18%	14%	17%	12%	24%	-	42%	15%
2001- 2002	-1%	1%	9%	-5%	-24%	-	4%	1%
2002 -2003	10%	-8%	17%	6%	-27%	-	-7%	-8%
2003 - 2004	1%	4%	-5%	-8%	23%	-	9%	-5%
2004 -2005	0%	-2%	-4%	-5%	-26%	-	-2%	-4%
2005 -2006	-4%	8%	2%	0%	14%	-	16%	1%
2006 -2007	7%	6%	3%	2%	-2%	-	12%	3%
2007 - 2008	2%	-7%	9%	-4%	21%	-	-3%	1%
2008 - 2009	17%	12%	19%	6%	-14%	-	9%	12%
2009 - 2010	4%	3%	6%	-9%	-16%	-	244%	4%
2010 - 2011	3%	4%	2%	-8%	-1%	62%	-28%	-3%

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Table 3

Ethnic Enrollment of First Time, Full-Time, Students in Texas Community Colleges During the 2000 and 2011 Academic Years

Ethnic group	2000		2011		% of change
	Number	Percent	Number	Percent	
Black	5,662	11	9,473	14	3
Asian	1,602	3	2,189	3	0
Hispanic	13,374	27	26,912	40	13
White	27,035	54	23,214	35	-19
International	1,896	4	1,145	2	-2
Multiracial	291*	.42*	472	.71	.29
Other	655	1	3,319	5	4
Total Students	50,224		66,724		

Note. The Multiracial category initiated in 2010 thus only data from the 2010 and 2011 academic years was available. The * indicates data taken from the 2010 academic year rather than 2000.

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Table 4

Enrollment of First Time, Full-Time Students in Texas Community Colleges by Gender for the Academic Years From 2000 through 2011

Year	Female		Male		% of change
	Number	Percent	Number	Percent	
2000	26,770	53	23,454	47	6
2001	30,947	54	26,770	46	8
2002	30,552	54	26,495	46	8
2003	33,206	54	28,426	46	8
2004	31,133	53	27,430	47	6
2005	29,376	52	26,774	48	4
2006	29,399	52	27,199	45	4
2007	30,490	52	27,804	48	4
2008	31,228	53	27,906	47	6
2009	34,578	52	31,493	48	4
2010	36,647	53	32,292	48	5
2011	35,532	53	31,192	47	6

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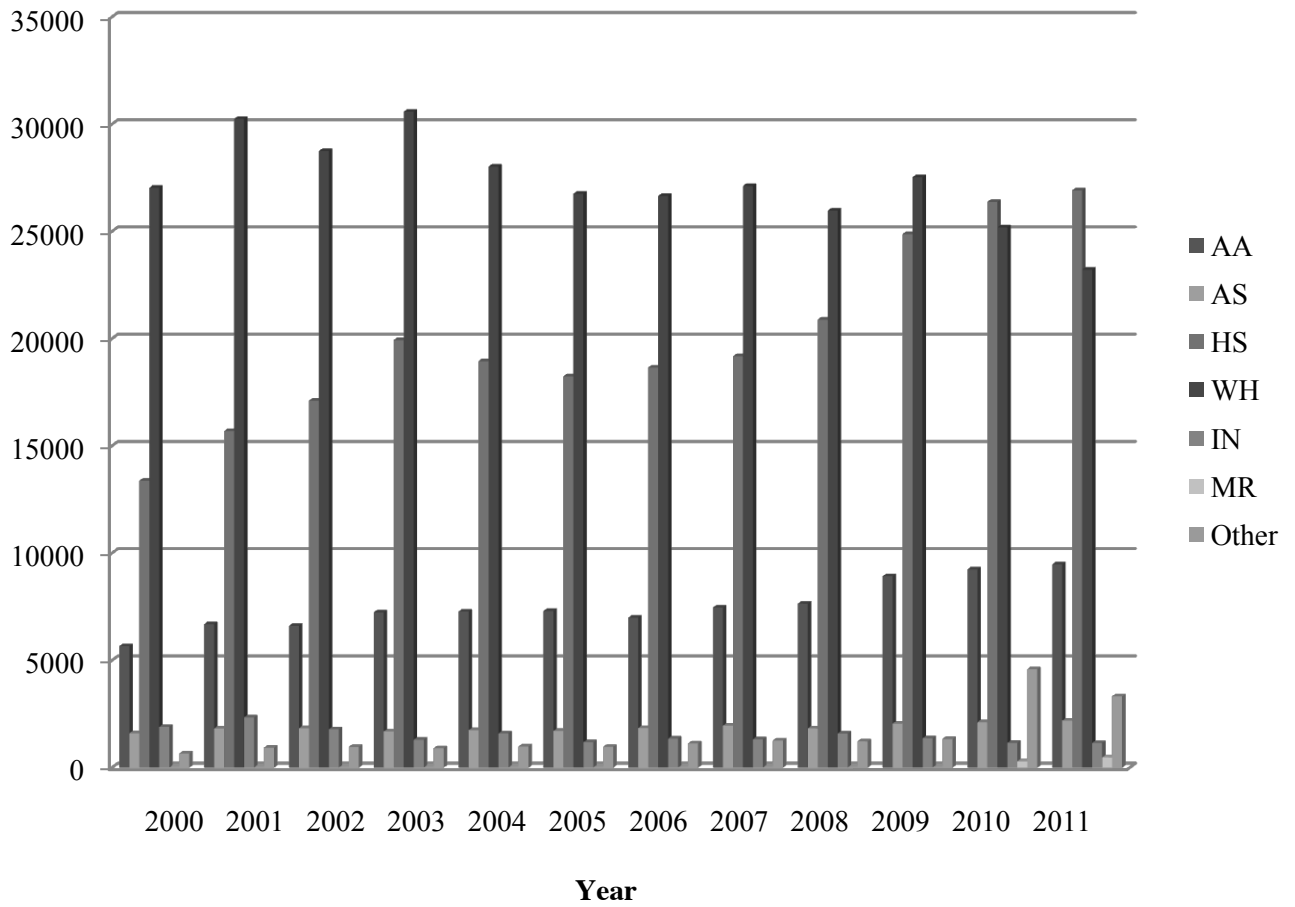


Figure 1. Total number of enrolled, first time, full-time, students attending community college campuses in the state of Texas, during the years 2000 through 2011 by ethnic grouping.

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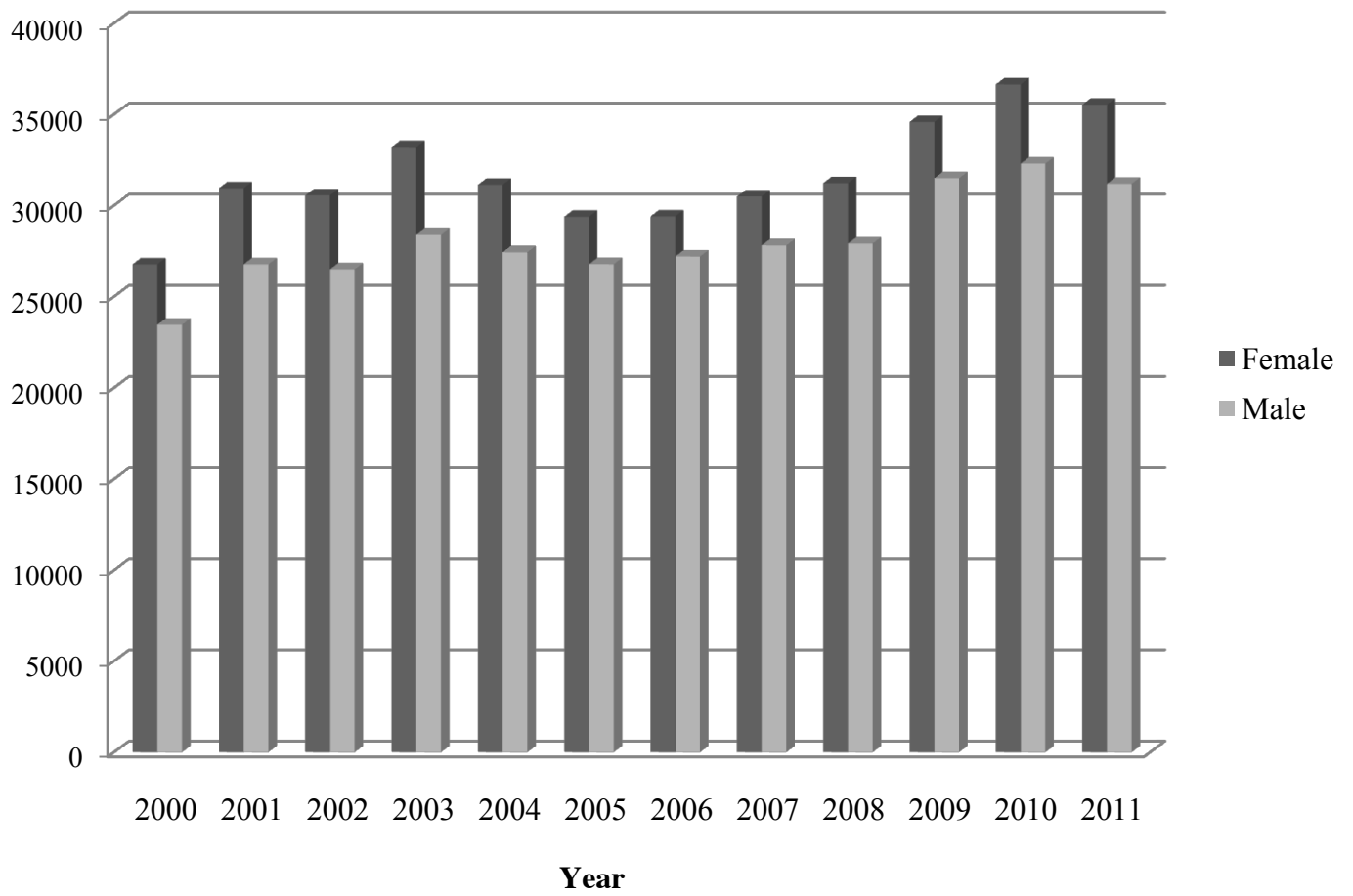


Figure 2. The total number of female versus male first year, full-time students attending community colleges in Texas over a 12-year span from the 2000 through 2011 academic years.