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Lizetta M. Frederick ^α & John R. Slate ^σ

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I. INTRODUCTION

President Obama in his State of the Union Address in 2014 emphasized the importance of college and career readiness. Obama said, "We're working to redesign high schools and partner them with colleges and employers that offer the real-world education and hands-on training that can lead directly to a job and career" (p. 6). Furthermore, he established the College Opportunity Summit where universities, businesses, and non-profits made commitments to reduce inequality in access to higher education. The President went on to say, "The best measure of opportunity is access to a good job" (Obama, 2014, p. 2). In his previous 2010 State of the Union Address, the President had emphasized the link between education and job opportunity by calling for more community college and business partnerships to offer needed job training for opportunities after graduation. He contended that community colleges "need to be community career

centers" (Obama, 2010, p. 2). With this call to prepare students better to attain their career goals, educators in the K-16 pipeline are searching for ways to help students succeed in their educational and career paths.

For over 30 years, colleges and universities in the United States have been concerned with student retention and persistence, especially because college graduation rates have remained around 50% (Pascarella & Terenzini, 1991, 2005; Tinto, 1993, 2012). "Although access to higher education has increased substantially over the past 40 years, student success in college – as measured by persistence and degree attainment – has not improved at all" (Brock, 2010, p. 109). Brock (2010) discussed important milestones that influence access to higher education as well as challenges faced by students who do gain access to higher education. Being admitted to a postsecondary institution is just the first step; students face a variety of hurdles (e.g., financial, academic, social) while trying to achieve their goals of graduation and a job.

Other factors influencing degree attainment for college students have been increases in the diversity of the undergraduate student population and the subsequent disparity in degree attainment for White, Hispanic, and Black students. Stated in The National Center for Education Statistics November 2013 Report (p. 5), "White students earned 70% of all bachelor's degrees awarded (compared to 77% of degrees in 2001-2002), Black students earned 11% (compared to 9% in 2001-2002), Hispanic students earned 10% (compared to 7% in 2001-2002)." This ethnic/racial disparity in degree attainment is reflected in the State of Texas as well. The percentage of White students who graduated in six years or less was 67.2%, whereas the percentage of Hispanic and Black students who graduated in six years or less was 51.1% and 41.2%, respectively (The Texas Higher Education Coordinating Board, 2014a). As Spangler and Slate (2014) documented in a recent research investigation, Texas community college persistence and graduation rates increased for Hispanics and Blacks during the decade spanning 2000-2010. In this empirical investigation, the success of Hispanic and Black students in attaining degrees and certificates in Texas career colleges will be analyzed during a similar time period.

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II. STATEMENT OF THE PROBLEM

Hispanics and Blacks now comprise 30% of the U.S. population (U.S. Census Bureau, 2013). Texas has led the nation in the percentage change of population growth since the census was first taken in 1860 and has had the largest percentage change from 2000 to 2010 (Murdock, 2011). The increase in the Hispanic population in Texas has been largely responsible for the changes in the diversity of the Texas population. Hispanics were expected to become the largest segment of the Texas population by 2015 (Texas Higher Education Coordinating Board, 2011). As of the most recent census data, Hispanics currently comprise 37% of the Texas population, which is larger than all other ethnic groups combined (26%) and equal to the white population which is also 37% (suburbanstatistics.org, 2015). Blacks comprise a much smaller percentage of the population, both nationally and in Texas, with 13.2% nationally and 12.4% in Texas. Over the past decade the Black population has grown at a slower rate (15%) than most other major ethnic/racial groups (U.S. Census Bureau, 2010). Specifically, the Black college-age population decreased from 11% in 2000 to 8.3% in 2012. This statistic is in sharp contrast to the doubling of the Hispanic college-age population growth between 2000 and 2010 (U.S. Census Bureau, 2010).

The size of the Black and Hispanic population is one factor to consider in preparing for future job opportunities and employment. Of importance with respect to these two groups is the current income of Black and Hispanic individuals. In the 2014 Census, the median household income for Blacks was \$34,598, the lowest of all minority groups. The median household income for Hispanics was slightly higher, at \$40,963 (U.S. Census Bureau, 2014). With the poverty threshold set at \$24,250 for a family of four, the U.S. Census Bureau calculated 35% of Hispanic children and 38.2% of Black children under 18 years old were living in poverty (U.S. Census Bureau, 2010).

To move out of poverty, Blacks and Hispanics need good-paying jobs, however, most jobs require a postsecondary education. In Texas, an estimated 56% of new jobs created between 2008 and 2018 require some form of postsecondary education (Carnevale, Smith, & Strohl, 2010). However, this trend in Texas is happening when the "highly educated" baby boom population is retiring (Frey, 2010, p. 30). As such, an opportunity is present for Black and Hispanic individuals to fill these positions, but only if the educational gaps among racial and ethnic groups is closed (Murdock, 2011; Texas Higher Education Coordinating Board, 2011).

In Texas, Blacks and Hispanics have been and continue to be underrepresented in higher education. As of the fall semester 2013, student enrollment in Texas institutions of higher education was comprised of 40.3%

White students, 33.2% Hispanic students, and 13.4% Black students (Texas Higher Education Coordinating Board, 2014a). The degree attainment for these groups in Texas is equally unbalanced: Whites 67.2%, Hispanics 51.1%, and Blacks 41.2% (Texas Higher Education Coordinating Board, 2014b). In a recent investigation conducted by Frederick and Melancon (2014), the degree attainment for Hispanic and Black students was tied to performance based funding. A statistically significant difference was not present for Black student graduation rates. However, Hispanic graduation rates increased 3.5% over the same 10-year period (Frederick & Melancon, 2014). Therefore, this lack of postsecondary degree attainment for Black and Hispanic individuals in Texas has the potential to create substantial workforce inequality. Whatever measures that can be taken to help these students graduate are important to implement, particularly for the State of Texas.

III. CAREER COLLEGES

For-profit institutions have seen dramatic growth during the same time period with enrollment numbers outpacing both public and non-profit institutions. The number of degrees conferred by for-profit institutions grew as well. Associate degree attainment grew by 125% in a decade and bachelor degree attainment grew by over 400%. This increase is in contrast to the 33% increase in associate degrees conferred and the 29% of bachelor's degrees conferred by public postsecondary institutions (National Center of Education Statistics, 2014). Consequently, it would appear that for-profit college students are better at achieving success than students who are enrolled at public institutions.

Career colleges have existed in the United States for over 150 years and have responded to workplace needs and changing technology. Founded in 1865, Mercantile College, now Everest College, in Philadelphia is the continual provider of career education. Strayer University was founded in 1892 in Washington, D.C. and DeVry Institutes of Technology opened its doors in Chicago in 1931 (Ruch, 2003). As these institutions progressed, their curriculum often expanded to include new technology as well as workforce demands. The invention of the typewriter and Gregg shorthand are two examples of technologies that influenced career colleges (Petrello, 2007).

By the mid-2000s, the demographic changes in the United States population were reflected in the student bodies of career colleges. In 2004, seven out of ten 4-year universities were producing the largest number of minority students with associate degrees. These seven universities were all career colleges (Hentschke, 2010). Career colleges have not been without challenges and controversy. The numerous defaults of these for-profit institutions in the 1980s

brought about more scrutiny from the U.S. government and the general public and led to tighter rules, particularly regarding commissions for admission officers. Most recently, the large amount of student debt and post-graduation wages has brought about additional bad publicity and further tightening of the rules (U.S. Department of Education, 2012).

Between the 1998 and 2008 academic years, student enrollment at career colleges tripled (Mantel, 2011). During this same time, 80% of the revenue generated came from student aid under Title IV of the Higher Education Act. Mantel (2011) summed it up this way, "While for-profits enroll close to 10 percent of all higher education students, those students receive more than 23 percent of all Title IV funds" (p. 4). The two most obvious reasons for this statistic were the high percentages of students (i.e., 95%) borrowing to cover tuition and the large number of students who dropped out of career colleges without attaining a degree or certificate. Mantel (2011) further stated, "The industry's recent rapid expansion is ending; after growing 24% in 2008 and 18% in 2009, student enrollment is expected to increase by a more modest 8% annually over the next several years" (p. 19). However, by the 2013 academic year, the for-profit college enrollment reached about 12% of all post-secondary students (National Conference of State Legislatures, 2013).

In July of 2011, new rules were implemented by the U.S. Department of Education regarding career colleges (U.S. Department of Education, 2011). The main areas covered under these new rules were graduation and job placement disclosures, misrepresentation, and incentive compensation. Verification of high school diplomas and an official Education Department definition of credit hour were also implemented in efforts to protect students and their student aid. Due to a lack of federal standards for calculating job placement rates, the federal government has been forced to utilize gainful employment regulations to calculate job placement rates for career colleges (Sykes, 2011).

Based on these new rules, Corinthian Colleges was fined nearly "\$30 million dollars for "misrepresentation of job placement rates to current and prospective students" (Boghani, 2015, p. 2). Specifically, graduates were sent to temporary agencies who had agreements with the college to place the graduates in positions at the same college from which they had just graduated. Also, students were counted as placed in jobs even if the job was not in the students' field of study. As a result of the fine and newly implemented regulations, Corinthian sold 85 of their campuses and closed another 12 campuses (Boghani, 2015).

Even with the implementation of these new regulations and rules, methods used to calculate job placement for graduates of for-profit schools are not

standardized by the federal government (Burd, 2014). For example, Sanford-Brown College reported a 71% job placement rate for its graduates in their diagnostic medical ultrasound program based on the formula used by their accrediting agency. When the State of New York's formula was used, however, the job placement rate for these same graduates decreased to 44% (Burd, 2014). Other federal agencies have scrutinized career colleges. The Department of Education has led the fight to make career colleges more transparent. In the 2015 academic year, the Department of Defense investigated the University of Phoenix regarding possible deceptive or unfair business practices regarding veterans' GI Bill benefits (Flaherty, 2015).

On July 1, 2015, new rules went into effect regarding job placement for graduates of schools with career-training programs. Emphasized in these new regulations was that students had to earn enough in their new positions to be able to repay their student loans (Ajmera & Brunnstrom, 2015). Mark Hyman wrote about the initial investigation of career colleges by the Department of Education. The Notice of Proposed Rulemaking focused on student debt to income ratio and loan repayment rates. If schools did not meet the minimum threshold in these two areas, the schools would be prohibited from receiving federal student aid dollars. The Department of Education also expressed concerns that career colleges "create labor oversupplies by graduating too many qualified workers for a specific profession causing unemployment and depressing salaries" (Hyman, 2010, p. 2). Determining specific postsecondary educational programs that lead directly to gainful employment was another issue the Department of Education considered (Hyman, 2010).

These new regulations were supported by the National Association for College Admissions Counseling. The new rules included prohibiting commissions, bonuses, or other payments based on success in securing enrollment or financial aid; a far too common of a practice at some career colleges (Ivory, 2010). The ban on incentive compensation reduced the motivation for institutions to use aggressive and misleading recruiting tactics, and it provided another avenue for the federal government to enforce protections against waste, fraud, and abuse by career colleges (Ivory, 2010).

In July of 2012, The *New York Times* reported the findings of a 2year investigation of for-profit colleges conducted by the Senate Health, Education, Labor and Pensions Committee chaired by Senator Tom Harkin of Iowa. Senator Hawkin noted evidence of "regulatory evasion and manipulation" by the for-profit schools. In fact, this Senate committee documented that the for-profit colleges they examined had a total of 32,496 recruiters compared with 3,512 career-services staff members. As such, these numbers constituted evidence that enrolling students and getting their federal

financial aid were the primary goals of these for-profit institutions (Lewin, 2012). Associate degree and certificate programs cost about four times as much as the programs at community colleges and universities. The for-profit institutions actually “set their tuition at what a student could expect in maximum federal aid” (Lewin, 2012, p. 4). In addition to these financial concerns that often occurred, many times students also learned too late that their credits would not transfer to other institutions.

In an article (Yeoman, 2012), published on the American Association of University Professors website, descriptions were provided of individuals who were deceived by some of these for-profit businesses. An admissions officer at Westwood College discovered that his job was to enroll as many students as possible and if he did well he would be rewarded with a trip to Cancun. This admission office commented, “The culture of lying was pervasive” (Yeoman, 2012, p. number is missing here.). Two students who were victims of this kind of sales pitch at Westwood College were told their credits would transfer, they would obtain internships in their specific fields of study, and weekly job leads upon graduation. None of these promises were kept. Unemployment and underemployment led to a myriad of problems for these students, including high default rates on their student loans. In 2011, the 3-year default rate for for-profit colleges was 22% compared to 7% at private non-profits and 10% at public institutions (Yeoman, 2012).

By the time the Department of Education began to implement the gainful employment standard, Berger (2010) reported for the National Association of College Admissions Counselors that this new standard would not lead to a shutdown of career colleges but, rather, would require them to change their pricing and approach to student debt. Under the new rules, only 16% of the 12,662 programs available would be fully eligible for federal loans and grants (Berger, 2010). These new regulations are an initial step in reigning in the industry. As such, students need to examine the costs and eventual job placement potential when deciding whether to choose a career college.

IV. PURPOSE OF THE STUDY

The purpose of this study was to examine the educational attainment of Hispanic and Black students in Texas career colleges from the 2009 through the 2014 academic years. The numbers and percentages of Hispanic students and Black students who completed either a degree or certificate in Texas career colleges from the 2009 through the 2014 academic years were determined. Furthermore, the degree to which changes had occurred in the educational attainment of Hispanic students and Black students between the 2009 and the 2014 academic years were ascertained.

V. SIGNIFICANCE OF THE STUDY

This study is important to the economic future of Black and Hispanic students in Texas and for the overall Texas workforce. Texas has recently become a minority majority state wherein the state population is composed of less than 50% Non-Hispanic Whites (U.S. Census Bureau, 2010b). Only three other states are majority-minority as of 2010: Hawaii, New Mexico, and California (U.S. Census Bureau, 2010b).

The access and success of students based on their economic status, race, and ethnicity undermine the goal of equity delineated in the Higher Education Act of 1965. More Hispanic and Black graduates are needed, particularly given the increase in the number of Hispanic students in Texas. Career institutions promote a quick route to job placement through graduation from their schools. Given President Obama's emphasis on college and career readiness, graduation, and ultimately, employment, a focus on career institutions is important (U.S. Department of Education, 2012).

The results of the study will be of relevance to researchers, policymakers, and educators. Researchers can compare the results of this study with the findings of Texas state community and technical colleges. Policymakers can utilize the results to help inform decision making especially with regard to community colleges and underrepresented students. Educators may use these data to inform prospective students and their families of the economic gains and social benefits of higher education, particularly, the differences in career colleges and their state-supported counterparts.

VI. RESEARCH QUESTIONS

The following research questions were addressed in this study: (a) What are the numbers of Hispanic students who obtained a degree or certificate from Texas 2-year career colleges from the 2009 through the 2014 academic years?; (b) What percent of the total students who obtained a degree or certificate from Texas 2-year career colleges was Hispanic for each of the 2009 through the 2014 academic years?; (c) What are the numbers of Black students who obtained a degree or certificate from Texas 2-year career colleges from the 2009 through the 2014 academic years?; (d) What percent of the total students who obtained a degree or certificate from Texas 2-year career colleges was Black for each of the 2009 through the 2014 academic years?; (e) What is the difference in the numbers of Hispanic students who obtained a degree or certificate from Texas 2-year career colleges between the 2009 and 2014 academic years?; (f) What is the difference in the percent of Hispanic students who obtained a degree or certificate from Texas 2-year career colleges between the 2009 and 2014 academic years?; (g) What is the difference in the numbers of

Black students who obtained a degree or certificate from Texas 2-year career colleges between the 2009 and 2014 academic years?; and (h) What is the difference in the percent of Black students who obtained a degree or certificate from Texas 2-year career colleges between the 2009 and 2014 academic years? The first four research questions are descriptive in nature and involve frequencies and percentages of Hispanic and Black students who obtained a degree or certificate for each academic year between 2009 and 2014. The last four research questions are inferential research questions and involve comparing the frequencies and percentages of Hispanic and Black students who obtained a degree or certificate between the 2009 and 2014 academic years.

VII. METHOD

a) Research Design

A causal-comparative research design was used for this study. Through use of this quantitative, non-experimental design, relationships between one or more categorical independent variables and one or more quantitative dependent variables may be determined (Johnson & Christenson, 2008). This research design was used because already existing data were analyzed in this investigation. As such, the data that were examined in this study had already occurred, thus, no manipulation of the variables is possible. In this empirical investigation, data were accessed from the Texas Higher Education Coordinating Board Interactive Accountability System which is a repository of Texas higher education data submitted from universities and colleges. In the current study, external validity should be strong based on having access to the total number of Hispanic students and the total number of Black students who obtained a degree or certificate in a Texas career college for the academic years noted in the research questions.

b) Participants and Instrumentation

Participants in this study were all Hispanic and Black students who obtained a degree or a certificate from a Texas career college as reported to the Texas Higher Education Coordinating Board for the 2009 through the 2014 academic years. Data in aggregated form are made available by the Texas Higher Education Coordinating Board Interactive Accountability System for each career college. Data that were downloaded from the Texas Higher Education Coordinating Board Interactive Accountability System were the numbers and percentages of Hispanic and Black students who obtained a degree or a certificate during this period from a Texas career college.

Archival data were downloaded from the Texas Higher Education Coordinating Board Interactive Accountability System for the 2009 through the 2014 academic years. The system is modeled on the state's

higher education plan, *Closing the Gaps* by 2015 which collects data on universities, health related institutions, technical colleges, community colleges, and career colleges in Texas (Texas Higher Education Coordinating Board, 2011). The collected data were used to determine the numbers and percentages of Hispanic and Black students who obtained a degree or a certificate from a Texas career college during the 2009 through the 2014 academic years.

VIII. RESULTS

The first research question was addressed by calculating descriptive statistics for the number of degrees and certificates obtained by Hispanic students in Texas 2-year career colleges for the 2009 through the 2014 academic years. Overall, the number of Hispanic students who obtained a degree or certificate from Texas 2-year career colleges fluctuated between the 2009 and 2014 academic years, with the largest number of students ($n = 10,385$) obtaining degrees and certificates in the 2012 academic year. In the last two academic years, slight decreases were present in the total number of Hispanic students who attained either a degree or a certificate in Texas 2-year career colleges. The total number of Hispanic students who obtained a degree or certificate from Texas career colleges from the 2009 through 2014 academic years was 52,900.

With respect to the average number of Hispanic students who attained a degree or a certificate at Texas career colleges, the highest averages were present for the 2011 ($M = 155.32$) and 2012 ($M = 152.72$) academic years. A decrease was noted in the average number of Hispanic students who attained a degree or certificate in the last two academic years. Readers should note, however, that the total number of career colleges in Texas increased from 52 career colleges in the 2009 academic year to a total of 80 career colleges in the 2014 academic year. During this same time period, the total number of Hispanic students who attained a degree or a certificate from a Texas 2-year career college increased from 7,796 to 9,617. The descriptive statistics for the first research question are presented in Table 1.

Table 1: Descriptive Statistics for the Number of Hispanic Students who Obtained a Degree or Certificate from a Texas Career College in the 2009 Through the 2014 Academic Years

Academic Year	n of career colleges	M	SD	Sum
2009	52	149.92	158.71	7,796
2010	55	101.78	119.58	5,598
2011	62	155.32	170.87	9,630
2012	68	152.72	143.53	10,385
2013	73	135.63	137.27	9,901
2014	80	120.20	149.80	9,617

The second research question was addressed by calculating the percentage of degrees or certificates that were attained by Hispanic students from Texas 2-year career colleges from the 2009 through the 2014 academic years. As revealed in Table 2, out of the degrees and certificates awarded by Texas 2-year career colleges in the 2009 academic year, 20.56% of them were attained by Hispanic individuals. Of all the

degrees and certificates awarded by Texas 2-year career colleges, Hispanic students increased their average percentage of the total from the 2009 academic year (i.e., 39.53%) to the 2014 academic year (i.e., 42.05%). In the last three academic years, Hispanic individuals attained over 40% of all degrees and certificates awarded by Texas 2-year career colleges.

Table 2: Descriptive Statistics for the Percentage of Degrees or Certificates from Texas Career Colleges That Were Attained by Hispanic Students in the 2009 Through the 2014 Academic Years

Academic Year	n of career colleges	M%	SD%
2009	52	39.53	25.04
2010	55	29.82	25.03
2011	62	39.08	26.29
2012	68	42.83	24.62
2013	73	42.30	26.43
2014	80	42.05	25.44

The third research question was addressed by calculating descriptive statistics for the number of Black students who obtained degrees and certificates from Texas 2-year career colleges for the 2009 through the 2014 academic years. As indicated in Table 3, the average number of Black students who obtained a degree or certificate from Texas 2-year career colleges in the 2009 academic year was 56.48. The average number of Black students who obtained a degree or certificate from Texas 2-year career colleges steadily increased from 56.48 in the 2009 academic year to a

high of 64.19 in the 2012 academic year. Readers should note, however, that the average number of Black students who obtained a degree or certificate had decreased to 47.15 in the 2014 academic year. Also evidenced in Table 3 is an increase in the total number of career colleges in Texas, with a total of 52 in the 2009 academic year to a total of 80 in the 2014 academic year. Furthermore, the total number of Black students who obtained a degree or certificate from Texas 2-year career colleges increased from 2,937 to 3,772 during this same 6-year period.

Table 3: Descriptive Statistics for the Number of Degrees or Certificates Obtained by Black Students from a Texas Career College in the 2009 Through the 2014 Academic Years

Academic Year	n of career colleges	M	SD	Sum
2009	52	56.48	61.48	2,937
2010	55	50.13	69.89	2,757
2011	62	59.05	74.39	3,661
2012	68	64.19	69.34	4,365
2013	73	53.75	57.85	3,924
2014	80	47.15	56.31	3,772

The fourth research question was addressed by calculating descriptive statistics for the percentage of Black students who obtained a degree or certificate from Texas 2-year career colleges for the 2009 through the 2014 academic years. As revealed in Table 4, the average percentage of students who obtained a degree or certificate from a Texas 2-year career college in the

2009 academic year and who were Black was 18.27%. The average percentage of students who obtained a degree or certificate from a Texas 2-year career college and who were Black fluctuated over the next 5 academic years, ultimately ending with the highest average percentage of 21.91% in the 2014 academic year.

Table 4: Descriptive Statistics for the Percentage of Black Students who Obtained a Degree or Certificate from a Texas Career College in the 2009 Through the 2014 Academic Years

Academic Year	n of colleges	M%	SD%
2009	52	18.27	14.73
2010	55	14.96	15.05
2011	62	17.46	15.64
2012	68	21.41	17.85
2013	73	20.57	18.58
2014	80	21.91	17.82

Next, the inferential research questions involving the extent to which changes had occurred in the numbers and percentages of students who were either Hispanic or Black and who had obtained a degree or certificate in a Texas 2-year career college were addressed. The underlying assumptions of the parametric dependent samples *t*-test were checked prior to its use. An examination of the standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the standardized kurtosis coefficients (i.e., the kurtosis value) revealed the coefficients were within the limits of normality, ± 3 (Onwuegbuzie & Daniel, 2002). Because the numbers and percentages of both Hispanic and Black students who obtained a degree or certificate from Texas 2-year career colleges were normally distributed, parametric dependent samples *t*-tests were determined to be appropriate to answer the inferential research questions.

With respect to the fifth research question concerning whether the average number of Hispanic students who obtained a degree or certificate from a Texas 2-year career college had changed between the 2009 and the 2014 academic year, a parametric dependent samples *t*-test was calculated. The result was not statistically significant, $t(51) = 0.21, p = .83$. As delineated in Table 5, the average number of Hispanic students who had obtained a degree or certificate from a Texas 2-year career college was similar for the 2009 and the 2014 academic years. Readers should note, however, that the total number of career colleges had increased from 52 to 80 during this time span. Thus, the total number of Hispanic students who had obtained a degree or certificate during this time period showed a dramatic increase.

Table 5: Descriptive Statistics for the Number of Degrees or Certificates Obtained by Hispanic Students in 2-Year Texas Career Colleges Between the 2009 and 2014 Academic Years

Academic Year	M	SD
2009	149.92	158.71
2014	145.08	157.64

With respect to the sixth research question concerning whether the average percent of degrees or certificates awarded by Texas 2-year career colleges to Hispanic students had changed between the 2009 and the 2014 academic years, a parametric dependent samples *t*-test was calculated. The result was not statistically significant, $t(51) = -1.71, p = .09$. As

delineated in Table 6, the average percent of degrees or certificates awarded by Texas 2-year career colleges to Hispanic students was similar for the 2009 and the 2014 academic years. Readers should note, however, that the total number of career colleges had increased from 52 to 80 during this time span.

Table 6: Descriptive Statistics for the Percent of Degrees or Certificates Awarded by Texas 2-year Career Colleges to Hispanic Students Between the 2009 and 2014 Academic Years

Academic Year	M%	SD%
2009	39.53	25.04
2014	44.04	26.52

With respect to the seventh research question concerning whether the average number of Black students who obtained a degree or certificate from a

Texas 2-year career college had changed between the 2009 and the 2014 academic years, a parametric dependent samples *t*-test was calculated. The result

was not statistically significant, $t(51) = 0.26, p = .80$. As delineated in Table 7, the average number of Black students who had obtained a degree or certificate from a Texas 2-year career college was similar for the 2009 and the 2014 academic years. Readers should note,

however, that the total number of career colleges had increased from 52 to 80 during this time span. Thus, the total number of Black students who had obtained a degree or certificate during this time period showed a dramatic increase.

Table 7: Descriptive Statistics for the Number of Degrees or Certificates Awarded by Texas Career Colleges to Black Students in the 2009 and 2014 Academic Years

Year	M	SD
2009	56.48	61.47
2014	54.12	59.81

With respect to the eighth research question concerning whether the average percent of Black students who obtained a degree or certificate from a Texas 2-year career college had changed between the 2009 and the 2014 academic year, a parametric dependent samples t -test was calculated. The result was not statistically significant, $t(51) = -1.07, p = .29$.

As revealed in Table 8, the average percent of Black students who had obtained a degree or certificate from a Texas 2-year career college was similar for the 2009 and the 2014 academic years. Readers should note, however, that the total number of career colleges had increased from 52 to 80 during this time span.

Table 8: Descriptive Statistics for the Percent of Black Students Who Obtained a Degree or Certificate from Texas Career Colleges in the 2009 and 2014 Academic Years

Year	M%	SD%
2009	18.27	14.72
2014	19.70	15.70

IX. DISCUSSION

The number of career colleges in Texas increased from 52 in the 2009 academic year to a total of 80 career colleges in the 2014 academic year. Along with increases in the number of career colleges in which students could enroll, the total numbers of Hispanic and Black students who attained a certificate or a degree during this time period also increased. The average number of Hispanic and Black students who obtained a degree or certificate from Texas 2-year career colleges rose steadily until reaching a high of 155.32 degrees and/or certificates attained for Hispanic students in the 2011 academic year and a high of 64.19 degrees and/or certificates attained for Black students in the 2012 academic year. Over twice as many Hispanic students than Black students obtained a degree or certificate from Texas career colleges in the 6-year period analyzed in this investigation. Hispanic students who attained a degree or certificate from a Texas 2-year career college over the six years of this study totaled 52,927 students, in comparison to a total of 21,416 Black students who obtained a degree or certificate from Texas 2-year career colleges over the same six years.

Over the 6-year period of the 2009 through the 2014 academic years, the average percentage of Hispanic and Black students who obtained a degree or

certificate from Texas 2-year career colleges fluctuated. The largest average percentage of Hispanic students who obtained a degree or certificate from Texas 2-year career colleges was 42.83% in the 2012 academic year. The largest average percentage of Black students who obtained a degree or certificate from Texas 2-year career colleges was 21.91% in the 2014 academic year.

The inferential research questions involving the extent to which changes had occurred in the numbers and percentages of students who were either Hispanic or Black and who had obtained a degree or certificate in a Texas 2-year career college were addressed. With respect to the research questions concerning whether the average number and average percent of Hispanic students who obtained a degree or certificate from a Texas 2-year career college had changed between the 2009 and the 2014 academic year, the average number and percent of Hispanic students who had obtained a degree or certificate from a Texas 2-year career college was similar for the 2009 and the 2014 academic years. With respect to the research questions concerning whether the average number and percent of Black students who obtained a degree or certificate from a Texas 2-year career college had changed between the 2009 and the 2014 academic years, the average number and percent of Black students who had obtained a degree or certificate from a Texas 2-year

career college was similar for the 2009 and the 2014 academic years.

a) *Connections with the Existing Literature*

With President Obama's call to reduce inequality in higher education and to increase partnerships between community colleges and business to offer job training for opportunities after graduation, educators in the K-16 pipeline are searching for ways to help students succeed in their educational and career paths (Obama, 2012, 2014). Inequalities in higher education are evident by the disparities in degree attainment for White, Hispanic, and Black students. In Texas, the percentage of White students who graduated in six years or less was 67.2%, whereas the percentage of Hispanic and Black students was 51.1% and 41.2%, respectively (The Texas Higher Education Coordinating Board, 2014).

For three decades, colleges and universities in the United States have been concerned with student retention and persistence, especially because college graduation rates have remained around 50% (Pascarella & Terenzini, 1991, 2005; Tinto, 1993, 2012). Being admitted to a postsecondary institution is just the first step as students face a variety of hurdles (e.g., financial, academic, social) while trying to achieve their goals of graduation and a job. Just as admission to a postsecondary institution is the first step toward attaining a degree, the attainment of a degree is the first step to getting a job. As stated by the U.S. Census Bureau, 56% of jobs require postsecondary education (2010).

Hispanics and Blacks now comprise 30% of the U.S. population (U.S. Census Bureau, 2013). As of the most recent census data, Hispanics currently comprise 37% of the Texas population, which is larger than all other ethnic groups combined (26%) and equal to the White population which is also 37% (suburbanstatistics.org, 2015). Blacks comprise a much smaller percentage of the population, both nationally and in Texas, with 13.2% nationally and 12.4% in Texas. Over the past decade the Black population has grown at a slower rate (15%) than most other major ethnic/racial groups (U.S. Census Bureau, 2010).

Blacks and Hispanics have been and continue to be underrepresented in higher education. As of the fall semester 2013, student enrollment in Texas institutions of higher education was comprised of 40.3% White students, 33.2% Hispanic students, and 13.4% Black students (Texas Higher Education Coordinating Board, 2014a). The degree attainment for these groups in Texas is equally unbalanced: Whites 67.2%, Hispanics 51.1%, and Blacks 41.2% (Texas Higher Education Coordinating Board, 2014b).

The size of the Black and Hispanic population is one factor to consider in preparing for future job opportunities and employment. Of importance with respect to these two groups is the current income of

Black and Hispanic individuals. In the 2014 Census, the median household income for Blacks was \$34,598, the lowest of all minority groups. The median household income for Hispanics was slightly higher, at \$40,963 (U.S. Census Bureau, 2014). With the poverty threshold set at \$24,250 for a family of four, the U.S. Census Bureau calculated 35% of Hispanic children and 38.2% of Black children under 18 years old were living in poverty (U.S. Census Bureau, 2010). To move out of poverty, Blacks and Hispanics need good-paying jobs, however, most jobs require a postsecondary education.

The access and success of students based on their economic status, race, and ethnicity undermine the goal of equity delineated in the Higher Education Act of 1965. More Hispanic and Black graduates are needed, particularly given the increase in the number of Hispanic students in Texas. Career institutions promote a quick route to job placement through graduation from their schools. Given President Obama's emphasis on college and career readiness, graduation, and ultimately, employment, a focus on career institutions is important (U.S. Department of Education, 2012).

b) *Implications for Policy and Practice*

Implications for policy may be derived from the results of this study. An examination of the results of this study is relevant to the Texas Closing the Gaps plan pertaining to participation and success goals for postsecondary education for Hispanics and Blacks. Such an analysis could permit a determination of the degree to which career colleges are fulfilling goals outlined in the Closing the Gaps plan. Secondly, the results of the study affirm the importance of seeking initiatives to support college participation and degree attainment for Hispanic and Black students in Texas career colleges. Finally, the results of this study provide additional educational attainment data for Texas career colleges developing policies related to a future Texas workforce.

X. RECOMMENDATIONS FOR FUTURE RESEARCH

In a data-driven educational environment, policymakers are becoming more supportive of research endeavors to support decision-making. Given the private and social effects of an educated future workforce in Texas, it is imperative for further examination of postsecondary educational attainment. Based on the results of this investigation, researchers are encouraged to address the degree to which certificate or degree attainment from these career colleges resulted in the student being employed. If employed, for what jobs were these graduates hired? Were both groups of graduates equally successful in gaining employment? Researchers are also encouraged to examine specific certificate and degree programs to determine whether students were equally

successful after graduation in obtaining employment. Or, were some certificate and degree programs more successful in others, with respect to student employment after graduation? The degree to which results from this investigation might be generalizable to other states is not known. Accordingly, research is needed in other states to ascertain whether results delineated herein might be generalizable. No data were available at the Texas Higher Education Coordinating Board Interactive Accountability system for student demographic characteristics such as gender and first-generation college student. Such information would be invaluable in future research to determine whether subgroups of individuals such as Black females are differentially attaining certificates or degrees or gaining employment.

Along with these investigations, qualitative research investigations could be conducted to obtain the perspectives of faculty members in Texas career colleges regarding certificate and degree programs, as well as the perspectives of students. Results from such studies could be used to improve program offerings. Finally, researchers are encouraged to conduct mixed-method investigations so that a more detailed analysis of career colleges and student outcomes could occur.

XI. CONCLUSION

In this multiyear, statewide investigation, the numbers of Hispanic and Black students who attained a certificate or a degree from a Texas career college in the past six years have increased. Along with this increase in the total numbers of certificates and degrees attained by Hispanic and Black students, the total number of career colleges has increased from 52 to 80. Given the emphasis at the national level on career readiness, the increases established in the numbers of certificates or degrees attained by Hispanic and Black students are important. What was not examined but merits considerable attention is the degree to which graduation from a career college resulted in employment. It is the answer to this question that will ultimately determine the value of career colleges.

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