

Gender Differences in Postsecondary Enrollment Rates of Texas Public High School

Graduates: A Multiyear, Statewide Study

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Abstract

Examined in this study was the degree to which gender differences were present in the postsecondary enrollment of Texas public high school graduates at Texas 2-year public colleges and at 4-year public universities. Specifically analyzed were the enrollment percentages of males and females for three academic years (i.e., 2012-2013 through 2014-2015) for Texas public high school graduates. Over the 3-year time period analyzed, statistically significant differences were present in the postsecondary enrollment of Texas public high school graduates by gender. Female Texas public high school graduates enrolled in both 2-year and 4-year public institutions at a higher rate than their male counterparts. Moreover, females tended to enroll at 2-year institutions at a higher rate than 4-year institutions. Implications of these results and recommendations for future research were discussed.

Keywords: Postsecondary enrollment, 2-year public institutions, 4-year public institutions, Gender, Texas

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The literature on gender inequality in American education has undergone switchbacks over the last century: from concern about a "boy problem" in the early twentieth century to focus on "shortchanging" girls and women from the 1960s to the 1990s to fear about the "end of men" in the early twenty-first century. (Renshaw & Clark, 2017, p. 79)

Gender gaps in educational expectations and enrollment in postsecondary settings are well documented (McDaniel, 2010; Rudel, 2015; Seifert, Wells, Saunders, & Gopaul, 2013). With respect to educational expectations, McDaniel (2010) determined high school students tend to be ambitious in setting educational goals. The family background, academic ability, and attitudes toward school of students' families were predictors of educational expectations for both males and females. The positive attitudes of females regarding the importance of schooling, compared to that of males, is an attribute that increases female educational expectations (McDaniel, 2010). Moreover, a decline in labor market discrimination may also be contributable to female educational aspirations (Neugebauer, Helbig, & Landmann, 2011)

Rudel (2015) analyzed the relationship of parental presence on postsecondary enrollment expectations of males and females. A father's presence in the house was related to the educational expectations of boys and girls. Boys with absentee fathers were more likely to attend college than boys from two parent households (Rude, 2015). In Rudel's (2015) investigation, boys and girls were affected differentially by the presence of specific parents in single family homes. That is, girls exhibited statistically significantly lower educational expectations in mother-only homes than did boys.

With respect to male and female levels of educational attainment and achievement (DiPrete & Buchmann, 2013; Riegle-Crumb, 2010; Wells et al., 2011), Riegle-Crumb (2010) contended that males may fall behind female counterparts because female students earn higher grades in high school and express stronger postsecondary ambitions than do males. Similarly, Buchmann, DiPrete, and McDaniel (2008) reviewed the literature on gender

inequalities in educational performance and academic attainment in elementary, secondary, and postsecondary schools. They reported student academic achievement in elementary and secondary schools related directly to the level of education students will ultimately achieve, including high school completion and beyond.

In the United States, the first step to accessing postsecondary education is the completion of high school. Of note is that gender disparities are not only present in postsecondary enrollment, they are also present in the graduation rates of high school students (National Center for Education Statistics, 2016a). For instance, in 2013, 8% of males dropped out of high school before obtaining a diploma, compared to only 5.6% of females (National Center for Education Statistics, 2016a). In 2016, females in Texas had a higher 4-year high school graduation rate, 91.4%, than males, 86.9% (Texas Education Agency, 2016b). As a result, students who do not complete high school are excluded from the pool of students who are eligible to attend college because they have not completed high school.

Participation in higher education increases the probability of moving up the socioeconomic ladder and reduces the need to depend on public assistance (Ma, Pender, & Welch, 2016). Without a high school diploma, students are less likely to earn an average income (Rampbell, 2014; Valletta, 2015). According to the National Center for Education Statistics (2016a), a person with only a high school diploma has an average salary of about \$30,500, whereas the average salary of a person with a bachelor's degree was \$50,000. Consequently, education is paramount with regard to upward financial mobility (Domina, Conley, & Farkas, 2011).

In the early years of the 21st century, the majority of higher education participants who received bachelor degrees were women (Snyder & Dillow, 2010). This situation is in contrast to the past, where for centuries, males exceeded females in educational expectations, enrollment, and degree attainment. This trend changed within the last four decades, when the numbers of females began to exceed the numbers of males in these areas (Buchmann, 2009; King, 2010; Renshaw & Clark, 2017; Seifert et al., 2010). In 1945, American college and universities enrolled approximately equal percentages of male and female students (National Center for Education Statistics, 1993). The percentage of females who enrolled in higher education began to increase in the late 1960s and early 1970s when women's expectations of their future no longer included following in their mother's footsteps as homemakers. Female participation in the workforce changed, and as a result, female college enrollment rates began to soar. Although this cultural phenomenon was a major step toward gender equality, the reversal in the gender gap did not occur until the late 20th century. Male total college enrollment decreased from 71% in 1947 to 43% in 2005 (Snyder, Dillow, & Hoffman, 2008).

From 2000 to 2015, the National Center for Education Statistics (2017) documented an increase from 63% to 69% in the percentages of high school graduates who subsequently enroll in higher education. In Fall of 2014, 17.3 million students in the United States enrolled in a postsecondary setting (National Center for Education Statistics, 2016b). Of those students, 10.6 million attended 4-year institutions and 6.7 million attended 2-year institutions. Fifty-six percent of this enrollment were female students. Hussar and Bailey (2011, 2016) projected women would continue to outpace men in postsecondary enrollment. Not only are females enrolling in institutions of higher learning at a higher rate, but females are also graduating at a higher rate than their male counterparts (National Center for Education Statistics, 2017).

With respect to Texas, higher percentages of females than males are enrolling in postsecondary settings. In 1997, Texas House Bill 588, commonly referred to as the "Top 10% Rule" was implemented. This bill mandated public universities to admit in-state students who graduated in the top 10% of their high school graduating class. Also, Texas House Bill 588 contributed to an ethnically/racially diverse pool of applicants. However, an unanticipated consequence of the mandate was an increase of female students in postsecondary institutions (Conger & Long, 2010).

Provided in decades of research are reasons why females were less likely to enroll in higher education than males. In recent years, the emphasis of the research studies has shifted to the decline in male enrollment. Buchmann et al. (2008) explored this gender shift in higher education. Other researchers (e.g., Conger & Long,

2010; Riegle-Crumb, 2010) indicated high school females have an advantage in postsecondary enrollment because they engage in more rigorous coursework, earn better grades, and have higher postsecondary aspirations than do their male counterparts, which place females higher in academic merit during the college admissions process. Also, females are more responsive to and benefit more from interventions designed to increase educational attainment (Angrist, Lang, & Oreopoulos, 2009; Deming, Hastings, Kane, & Staiger, 2014).

In an investigation into gender gaps in education, Conger and Long (2013) examined how gender sorting, the distribution of males and females, across public high schools contribute to the growing gender gap in higher education enrollment. Using data from four cohorts of public school students in the state of Florida, they measured the degree of sorting between males and females across schools. Conger and Long (2013) established that the level of gender sorting across Florida public high schools was beyond what would be expected if students were randomly assigned to their schools. As such, they stated that males were more apt than were females to attend high schools with lower college-going rates. Another important finding was that the degree to which males and females sort across Florida high schools, 5% of males or females, would need to change schools to achieve gender balance. Additionally noted was that across school gender sorting explained the 12% and 16% increase of female enrollment among Hispanic and Black students, respectively. Conger and Long (2013) contended that gender sorting trends could be an influencing factor in educational outcomes and the female advantage in higher education enrollment.

Another topic related to gender gaps in postsecondary enrollment is that of social capital. Klevan, Weinberg, and Middleton (2016) examined how social capital explained differences in higher education enrollment. Utilizing data from the 2002 Educational Longitudinal Study, they analyzed social capital and its relationship to postsecondary enrollment. Klevan et al. (2016) contended that males were at a disadvantage with respect to postsecondary enrollment when considering certain social capital variables. After controlling for the following variables (a) race/ethnicity, (b) parent's education, (c) native language, (d) standardized test scores, (e) socioeconomic status, (f) region of schools, and (g) number of siblings in the home, social capital was determined to be statistically significantly correlated to postsecondary enrollment. Klevan et al. (2016) documented that social capital reduces the probability of females enrolling in college compared to males from 1.63 to 1.41. When gender, social capital, and grade point average were examined, the enrollment probability decreased from 1.41 to 1.23. These findings are congruent with previous researchers (e.g., DiPrete & Buchmann, 2013) who established that academic performance was an excellent predictor of postsecondary enrollment and explained gender gaps in higher education enrollment. In conclusion, Klevan et al. (2016) contended that gender interacts with social capital on postsecondary enrollment, which is consistent with females receiving different returns on social capital.

In a similar analysis for Black and White students, Davis and Otto (2016) examined factors influencing the gender gap in higher education enrollment. Data were obtained from the National Educational Longitudinal Study on the gender gap in higher education enrollment and factors that might influence college enrollment. Results were that Black male students were statistically significantly lower on all predictors of college enrollment than other race-gender groups. White females had higher academic, social, economic, and ecological predictors, meaning they had a higher likelihood of enrolling in postsecondary education than Black females. Davis and Otto's hypothesis that social, academic, and family economic characteristics differ along race-gender lines was supported by their research results.

In another study regarding the gender gap, Renshaw and Clark (2017) examined the educational degree achievements of birth cohorts from 1910 to 1979. Using the General Social Survey data, they analyzed changes in the attainment of secondary and postsecondary degrees by gender. Findings were that an increase in male educational attainment was observed for cohorts born between 1910 and 1930. Renshaw and Clark (2017) contributed this increase to the establishment of programs such as the GI Bill. Additionally documented was that female and male high school graduation rates were similar; however, male higher education attainment outpaced females for these cohorts. Moreover, the reversal of the male advantage began in the birth cohorts of the 1940s and 1950s. A small female advantage was recognized in the cohort of the 1960s, but it was not

until the 1970s cohort that a substantial female advantage was achieved. Renshaw and Clark (2017) concluded that changes in female opportunities and public critique were influential in creating change.

As demographics continue to change in higher education in the first quarter of the 21st Century, administrators are facing challenges because women are increasingly outnumbering male enrollments. Growing enrollment gaps by gender have been identified as a variable that could negatively influence academic selectivity by top applicants and the overall receipt of applications from academically competitive college graduates (Jaschick, 2005; Tierney, 2006). Such concerns have been validated by researchers (e.g., Ge, 2011; Williams, 2010) who described trends where females have enrolled in college to increase their returns in the marriage market and have expressed concerns that options are limited in institutions of higher education with low male enrollment.

Statement of the Problem

Texas K-12 public school enrollment increased by 19% from 2003 to 2013, more than six times the increase in public school enrollment in the United States (Texas Education Agency, 2016a). This increase represents the second highest percentage in statewide public school enrollment in the nation (Texas Education Agency, 2016a). Although enrollment rates in public high schools are increasing, the rates at which high school students are graduating remains low. The National Center for Education Statistics (2015) reported that only eight of every 10 current high school students graduate from high school. With respect to Texas, the number of high school graduates increased by 26,166 students, an 11% increase, from 2003 to 2009 (Texas Higher Education Coordinating Board, n.d.). In the Texas high school class of 2016, 89.1% of students graduated (Texas Education Agency, 2017). Of the students who graduated, females had a higher graduation rate compared to males (Texas Education Agency, 2017).

Texas experienced an increase of 4% of high school graduates, both men and women, who enrolled in a Texas higher education institution following their high school graduation from 2003 to 2009 (Texas Higher Education Coordinating Board, n.d.). However, a larger percentage of women enrolled during this time, resulting in a 7% gender gap in male and female college-going rates. Similarly, during the fall of 2016, 51% of Texas high school graduates enrolled in postsecondary institutions in Texas (Texas Higher Education Coordinating Board, 2016). Of those students enrolled, 53% were female (Texas Higher Education Coordinating Board, 2016).

The National Center for Education Statistics (2012) projected female enrollment in postsecondary institutions would increase by 21% through 2019, whereas male enrollment would only increase by 12%. This growing gender gap in postsecondary enrollment is important because education is a predictor of many adult outcomes, such as income, health, and occupational attainment. Of concern in this investigation is the differences in postsecondary institution enrollment rates of Texas public high school males and female graduates.

Purpose of the Study

The purpose of this study was to examine the degree to which gender differences were present in the postsecondary enrollment of Texas public high school graduates at Texas 2-year public colleges and at Texas 4-year public universities. Specifically analyzed in this investigation were the percentages for three years (i.e., 2012-2013, 2013-2014, and 2014-2015) for male and female students who graduated from Texas public high schools and who enrolled in a Texas 2-year public postsecondary setting or in a Texas 4-year public postsecondary institution. As such, the extent to which differences were present in the postsecondary enrollment of males and females are ascertained. Through the analysis of three years of Texas statewide data, any trends that were present were identified.

Significance of the Study

As higher education enrollment among women has become a more common occurrence across the United States, findings from this study will be important to determine the degree to which Texas postsecondary enrollment rates at 2-year public colleges and 4-year public colleges and universities are commensurate with national postsecondary enrollment rates. Knowing the demographic characteristics of students who completed public high school and subsequently enroll in postsecondary education may be of value to higher education leaders and policymakers, as well as to K-12 educational leaders. Colleges and universities are now operating in an academic environment where occupational interests of women are replacing the occupational interests of men. Information obtained from analyzing three years of data may be helpful in determining the degree to which inequities in postsecondary enrollment by student gender are present.

Research Questions

The following research questions were addressed in this empirical, multiyear investigation: (a) What is the difference in postsecondary enrollment at Texas 2-year public institutions between male and female public high school graduates?; (b) What is the difference in postsecondary enrollment at Texas 4-year public institutions between male and female public high school graduates?; (c) What trend is present in the postsecondary enrollment of Texas public high school male and female graduates at 2-year public institutions from the 2012-2013 through the 2014-2015 academic years?; and (d) What trend is present in the postsecondary enrollment of Texas public high school male and female graduates at 4-year public institutions from the 2012-2013 through the 2014-2015 academic years? The first two research questions were repeated for the 2012-2013 through the 2014-2015 academic years whereas the last two research questions involved all three academic years. As such, 12 research questions comprised this study.

Method Research Design

A non-experimental causal-comparative research design was used for this study (Creswell, 2009; Johnson & Christenson, 2012). Because archival data were used in this investigation, the independent variable and the dependent variables had already occurred. Accordingly, no variables can be manipulated (Johnson & Christensen, 2012). The independent variable analyzed was gender (i.e., male or female) in each of the years of data analyzed. The dependent variables present in this investigation were the postsecondary enrollment percentages of male and female public high school graduates at Texas 2-year public institutions and at Texas 4-year public institutions. A total of three academic years of data was analyzed.

Participants and Instrumentation

For the purpose of this study, archival data were obtained from the Texas Education Agency Academic Excellence Indicator System. The Texas Education Agency collects and stores data from Texas public high schools and school districts. The Texas Education Agency makes an extensive array of data available to anyone with internet access.

For the purpose of this investigation, postsecondary enrollment is defined as any time enrolled in a public postsecondary setting in the State of Texas. The term postsecondary setting is inclusive of both 2-year public institutions and 4-year public settings. A 2-year institution is an institution offering at least a 2-year program of college level studies, which terminates in an associate degree or is partially creditable toward a baccalaureate degree (National Center for Education Statistics, n.d.). A 4-year institution is one offering at least a 4-year program of college-level studies principally creditable toward a baccalaureate degree (National Center for Education Statistics, n.d.). Readers should note that postsecondary enrollment in this article will refer to Texas public high school graduates enrolling in a public postsecondary setting in Texas. Those Texas public high school graduates who enrolled in postsecondary institutions in states other than Texas were not included in this

investigation. Moreover, Texas public high school graduates who enrolled in a private postsecondary institution in Texas were not in the dataset that was analyzed.

Three academic years of archival data collected from all public high schools by the Texas Education Agency and disseminated through the Texas Academic Performance Reports System on cohorts of students who attended Grade 8 in a Texas public school, graduated, and enrolled in a public higher education institution in Texas, were analyzed for the 2012-2013 through the 2014-2015 academic years. Included in this dataset were statewide information on student gender and postsecondary enrollment rates.

Results

Prior to conducting inferential statistics to determine whether statistically significant differences were present by gender in the postsecondary enrollment of Texas public high school graduates at Texas 2-year public colleges and at Texas 4-year public universities, checks were conducted to determine the extent to which the data were normally distributed. Although some of the postsecondary enrollment rate data were not normally distributed, a decision was made to use parametric dependent samples *t*-tests to answer the research questions. Statistical results will now be presented by research question.

Results for Research Question One

In analyzing postsecondary enrollment percentages at Texas 2-year public institutions between male and female public high school graduates for the 2012-2013 academic year, the parametric dependent samples *t*-test analysis yielded a statistically significant difference, $t(239) = 8.92, p < .001$, Cohen's $d = 0.51$. The effect size for this difference was moderate (Cohen, 1988). The postsecondary enrollment rate for females was almost five percentage points more than the postsecondary enrollment rate for males in Texas public 2-year institutions. Readers should note that less than one third of males enrolled in 2-year public colleges compared to slightly more than one third of females in the 2012-2013 academic year. Delineated in Table 1 are the descriptive statistics for this analysis.

Table 1

Descriptive Statistics of Postsecondary Enrollment at Texas Public 2-year Institutions for Male and Female Public High School Graduates for the 2012-2013, 2013-2014, and 2014-2015 Academic Years

Academic Year and Gender	n of counties	M%	SD%
2012-2013			
Male	240	29.85	9.33
Female	240	34.67	9.57
2013-2014			
Male	243	29.73	9.08
Female	243	36.24	10.94
2014-2015			
Male	237	31.07	8.44
Female	237	36.37	10.10

Concerning the 2013-2014 academic year, the parametric dependent samples *t*-test analysis yielded a statistically significant difference in postsecondary enrollment percentages, $t(242) = 11.79, p < .001$, Cohen's $d = 0.65$, between males and females. This difference represented a moderate effect size (Cohen, 1988). Female postsecondary enrollment rates were more than six percentage points higher than the postsecondary enrollment rates of male public high school graduates. Similarly, as noted in the 2012-2013 academic year, less

than one third of males enrolled in Texas public 2-year colleges compared to slightly more than one third of females who enrolled in Texas public 2-year colleges. Table 1 contains the descriptive statistics for this analysis.

With respect to the 2014-2015 academic year, the parametric dependent samples *t*-test analysis yielded a statistically significant difference in postsecondary enrollment percentages, $t(236) = 11.701, p < .001$, Cohen's $d = 0.57$, between males and females. This difference represented a moderate effect size (Cohen, 1988). Female postsecondary enrollment rates were more than five percentage points higher than the postsecondary enrollment of male public high school graduates. Similar to the previous two years, the enrollment percentages for males were statistically significantly lower than the enrollment percentages of females at Texas public 2-year institutions. Revealed in Table 1 are the descriptive statistics for this analysis.

Results for Research Question Two

Concerning postsecondary enrollment percentages at Texas 4-year public institutions between male and female public high school graduates for the 2012-2013 academic year, the parametric dependent samples *t*-test yielded a statistically significant difference, $t(235) = 11.18, p < .001$, Cohen's $d = 0.58$. The effect size for this difference was moderate (Cohen, 1988). The postsecondary enrollment rates of females was five percentage points higher than the postsecondary enrollment rates of male public high school graduates in Texas public 4-year universities. Less than one fifth of males enrolled in Texas 4-year public universities compared to slightly more than one fifth of females who enrolled in Texas public 4-year universities. Table 2 contains the descriptive statistics for this analysis.

Table 2

Descriptive Statistics of Postsecondary Enrollment at Texas Public 4-year Institutions for Male and Female Public High School Graduates for the 2012-2013, 2013-2014, and 2014-2015 Academic Years

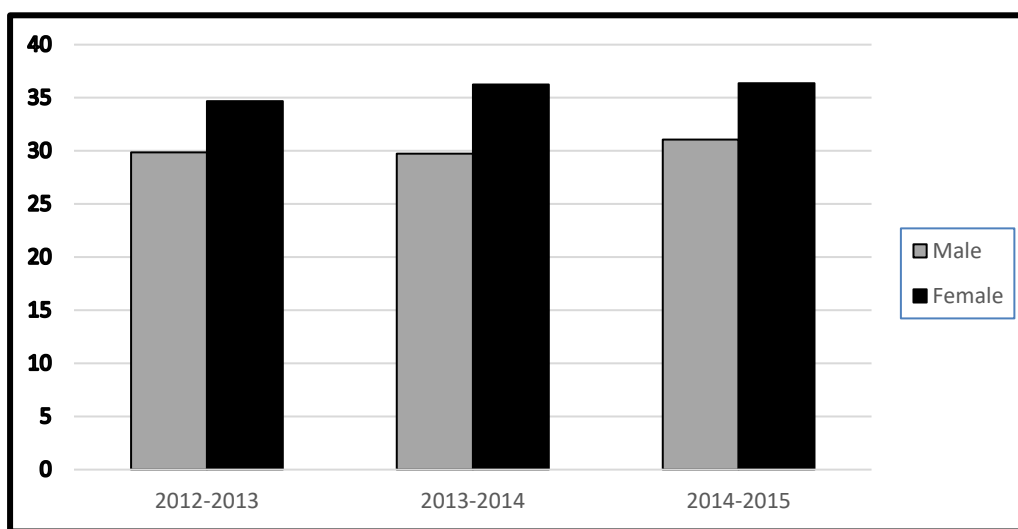
Academic Year and Gender	<i>n</i> of counties	<i>M</i> %	<i>SD</i> %
2012-2013			
Male	236	17.59	7.46
Female	236	22.49	9.35
2013-2014			
Male	243	18.03	7.59
Female	243	22.40	9.85
2014-2015			
Male	238	18.78	9.02
Female	238	22.86	9.26

With respect to the 2013-2014 academic year, the parametric dependent samples *t*-test yielded a statistically significant difference, $t(242) = 8.68, p < .001$, Cohen's $d = 0.50$. The effect size for this difference was moderate (Cohen, 1988). Female postsecondary enrollment rates were more than four percentage points higher than the postsecondary enrollment rates of male public high school graduates. In agreement with the results for the 2012-2013 academic year, less than one fifth of males enrolled in Texas 4-year public universities compared to slightly more than one fifth of females who enrolled in Texas public 4-year universities. Readers are directed to Table 2 for the descriptive statistics for this analysis. For the 2014-2015 academic year, the parametric dependent samples *t*-test yielded a statistically significant difference, $t(237) = 8.80, p < .001$, Cohen's $d = 0.45$. This difference represented a small effect size (Cohen, 1988). Female postsecondary enrollment rates were more than four percentage points higher than the postsecondary enrollment of male public high school graduates. Similar to the previous two years, the postsecondary enrollment percentages for males were statistically significantly lower than the postsecondary enrollment percentages of females at Texas public 4-year institutions. Delineated in Table 2 are the descriptive statistics for this analysis.

Results for Research Question Three

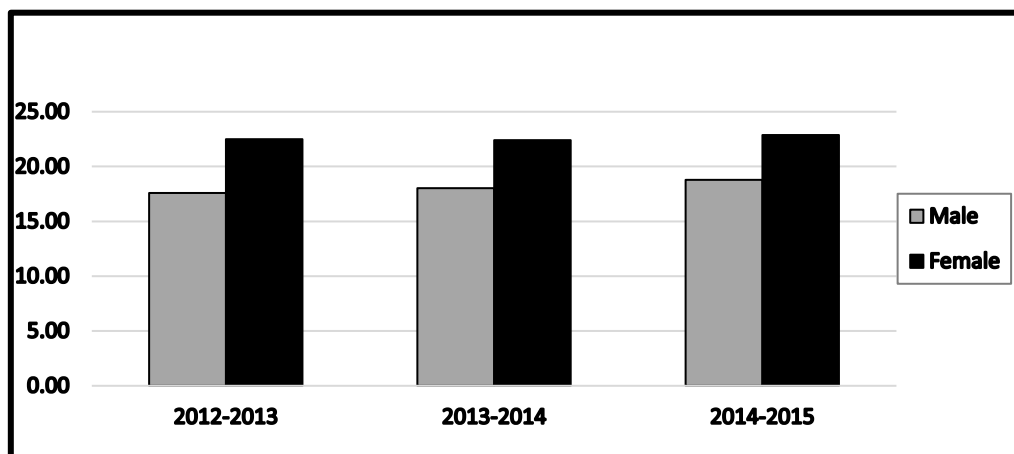
The third research question regarding an analysis of all three years of data for postsecondary enrollment rates by gender of Texas public high school graduates enrolling in Texas 2-year public institutions will now be addressed. As shown in Figure 1, trends were clearly present in the postsecondary enrollment rates of Texas public high school graduates for males and females who enrolled in Texas public 2-year institutions. The postsecondary enrollment rates of females were consistently higher than the postsecondary enrollment rates of males. Over the 3-year period, the enrollment rates of female Texas public high school graduates who enrolled in Texas public 2-year postsecondary institutions increased by 1.7%. During the same 3-year period, the postsecondary enrollment rates of male Texas public high school graduates in Texas public 2-year postsecondary institutions increased by 1.22%.

Figure 1. Trends in the postsecondary enrollment rates at Texas 2-year public institutions for male and female Texas public high school graduates in the 2012-2013 through the 2014-2015 academic years.



Results for Research Question Four

The fourth research question concerning all three years of data for postsecondary enrollment rates by gender of Texas public high school graduates enrolling in Texas 4-year public institutions will now be discussed. As depicted in Figure 2, trends were clearly present in the postsecondary enrollment rates of Texas public high school graduates for males and females who enrolled in Texas public 4-year institutions. The postsecondary enrollment rates of females were consistently higher than the postsecondary enrollment rates of males. Over the 3-year period, the enrollment rates of female Texas public high school graduates who enrolled in Texas public 4-year postsecondary institutions increased by 0.4%. During the same 3-year period, the postsecondary



enrollment rates of male Texas public high school graduates in Texas public 4-year postsecondary institutions increased by 1.18%.

Figure 2. Trends in the postsecondary enrollment rates at Texas 4-year public institutions for male and female Texas public high school graduates in the 2012-2013 through the 2014-2015 academic years.

Discussion

Addressed in this investigation was the degree to which gender differences were present in the postsecondary enrollment rates of Texas public high school graduates at Texas 2-year public colleges and at Texas 4-year public universities. Three years (i.e., 2012-2013, 2013-2014, and 2014-2015) of archival data were obtained from the Texas Education Agency. These data were then analyzed to determine whether the postsecondary enrollment rates of Texas public high school graduates differed between males and females. For the three academic years of data that were analyzed, statistically significant differences were present in each academic year. In this multiyear analysis, females in all three academic years had higher enrollment rates in Texas public 2-year and 4-year postsecondary institutions than their male counterparts.

The percentage of female Texas public high school graduates who enrolled in Texas public 2-year institutions from the 2012-2013 through the 2014-2015 academic year increased by a mere 1.70%. In contrast, the male enrollment rates in public postsecondary institutions increased by only 1.22%. Differences in the public postsecondary enrollment rates between female and male public high school graduates at Texas public 2-year colleges ranged from a low of 4.82% to a high of 6.51%. As noted previously, females had higher postsecondary enrollment rates in Texas public 2-year settings than males.

Similar to the 2-year public postsecondary enrollment rates, female students had higher public postsecondary enrollment rates in Texas public 4-year institutions from the 2012-2013 through the 2014-2015 academic years. The postsecondary enrollment rates increased by only 0.4% for females over this time period. In contrast, the postsecondary enrollment rates of males increased by 1.18%. Although females had higher enrollment in Texas public postsecondary institutions during all three years of this study, females experienced the largest enrollment percentage growth at 2-year public institutions compared to 4-year public institutions.

Connections with the Existing Literature

Extensive literature can be located on gender differences in postsecondary enrollment rates. Early researchers (Jacob, 2002; Peter & Horn, 2005) documented the presence of higher grades in high school and stronger postsecondary ambitions of females as reasons males lag behind their female counterparts in educational expectations. Additionally, Goldin et al. (2006) noted that female participation in the workforce changed which resulted in female college enrollment rates beginning to soar. More recently, researchers (Klevan, Weinberg, & Middleton, 2016; Renshaw & Clark, 2017) identified a growing gender gap in postsecondary enrollment with a larger percentage of women enrolling. DiPrete and Buchmann (2013) established that academic performance was a predictor of postsecondary enrollment and explained the gender gaps in higher education. In this investigation, postsecondary enrollment rates varied between males and females. Texas female public high school graduates enrolled in postsecondary institutions at a rate higher than did Texas male public high school graduates in all three academic years. This higher rate of enrollment occurred in both 2-year public settings and in 4-year public institutions. As such, results of this research investigation were congruent with the results of other researchers in that females enroll in postsecondary institutions at higher rates.

Implications for Policy and for Practice

Based upon the results of this multiyear empirical analysis, several implications for policy and for practice can be made. First, it is imperative that Texas institutions of higher education make the necessary changes to address

the gender disparities. These changes can include strongly encouraging males to invest in their education to ensure a promising economic future. Education regarding the importance of postsecondary education could be accomplished through partnerships with area high schools, also through college access programs. It is imperative to inform males that success in life is no longer associated with hard labor, but that the future of work place opportunities are connected to postsecondary education.

A second implication for practice, in an effort to reduce the gender gaps in postsecondary enrollment, is for higher education leaders to review hiring practices specifically in regard to gender. Having male outreach staff available to encourage and discuss the importance of males graduating from high school and subsequently enrolling in postsecondary education could assist with narrowing this gap. A third implication for practice is to evaluate recruitment strategies. Based upon the results, additional resources may need to be allocated to ensure male high school students can successfully enroll and attend higher education. A fourth implication would be to focus on the low percentage of students graduating high school and not enrolling in postsecondary education. This could be accomplished by expanding postsecondary outreach opportunities to local churches, shopping centers, and sports events. According to Carnevale (2016), more than 60% of today's jobs require some type of postsecondary experience. It is imperative that Texans obtain postsecondary education to find employment that will provide a livable wage but also to ensure the economic future of this country.

Recommendations for Future Research

Given the results of this multiyear investigation, several recommendations for future research can be made. First, researchers could extend this study by analyzing similar data by the race/ethnicity of students. Such an analysis would permit for a determination of whether the results obtained herein are similar across ethnic/racial groups. Second, researchers are also recommended to extend this investigation by economic status. Such an analysis would reveal if postsecondary enrollment trends differ by the economic status of students. Third, because data on only Texas public high school graduates were analyzed in this investigation, researchers are encouraged to extend this study to other states. Such an analysis would be helpful to ascertain if the postsecondary enrollment rates documented herein would be generalizable to other states. The degree to which the inequities herein are generalizable to students in other states is not known.

A fourth recommendation would be to conduct qualitative studies to determine the reasons female and male students choose to enroll and choose to not enroll in postsecondary education. These studies could provide useful information regarding challenges, experiences, and misunderstandings of postsecondary education enrollment. A mixed method approach would be even more powerful as you are able to have an analysis of the data as well as the reasons behind why students choose to enroll and not enroll. The use of individual student data rather than aggregated data used during the current study would also be beneficial. A fifth recommendation would be to follow the students over time, from middle school through postsecondary enrollment. Following students over a period of time will provide an opportunity to see enrollment trends and persistence from middle school, to high school, through postsecondary enrollment. These data may be useful as higher education institutions are turning to predictive analytics to individualize student access and success. A final recommendation would be for researchers to analyze more years of data than were analyzed in this investigation. In this empirical, statewide investigation, only three years of data were examined. A longer period of time would permit determinations regarding the presence of trends in postsecondary enrollment by gender.

Conclusion

In this multiyear, statewide analysis, the degree to which differences were present in postsecondary enrollment rates of Texas public high school graduates by gender during the 2012-2013, 2013-2014, and 2014-2015 academic years was addressed. Over the 3-year time period analyzed, statistically significant gender differences were present in the postsecondary enrollment rates of Texas public high school graduates. Texas female public high school graduates enrolled in both 2-year public institutions and in 4-year public institutions at statistically significantly higher rates than their male counterparts. For the three academic years, Texas female public high

school graduates postsecondary enrollment increased by 1.7%, compared to their male counterparts who postsecondary enrollment increased by 1.22% in Texas public 2-year institutions. The enrollment rates of female Texas public high school graduates who enrolled in Texas public 4-year postsecondary institutions increased by 0.4% over the three years analyzed. During the same 3-year period, the postsecondary enrollment rates of male Texas public high school graduates in Texas public 4-year postsecondary institutions increased by 1.18%.

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