INTERNATIONAL JOURNAL OF MODERN EDUCATION STUDIES

| Volume 5- No 1- June 2021- ISSN 2618-6209 |

Research Article

Differences in Male and Female Texas Community College First-Time-in-College Part-Time Students Over Time: A Multiyear, Statewide Analysis

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International Journal of Modern Education Studies

June, 2021
Volume 5, No 1
Pages: 1-20
http://www.ijonmes.net
dergipark.gov.tr/ijonmes

Article Info:

Received :22.12.2020
Accepted :14.01.2021

DOI:
10.51383/ijonmes.2021.61

Abstract:

In this multiyear, statewide investigation, the extent to which enrollment rates of male and female, part-time, first-time-in-college students enrolled in Texas community colleges differed from the 2003-2004 academic year to the 2018-2019 academic year was determined. From the 2003-2004 academic year to the 2011-2012 academic year, statistically significant differences were identified in the enrollment rates of both male and female, part-time, first-time-in-college students. Cohen's d effect sizes, calculated for both male and female, part-time students, were small (0.22). Enrollment rates for male and female, part-time, first-time-in-college students from the 2011-2012 academic year to the 2018-2019 academic year and from the 2003-2004 academic year to the 2018-2019 academic year were similar. Enrollment rates for male and female, part-time, first-time-in-college students enrolled in Texas community colleges remained consistently around 45% and 55%, respectively, during the 16 academic year span. Recommendations for future research as well as implications for policy were discussed.

Keywords: Part-time, First-time-in-college students, Enrollment rates, Texas community colleges, Male, Female

Citation:

Maynard II, J., P. & Slate, J., R. (2021). Differences in Male and Female Texas Community College First-Time-in-College Part-Time Students Over Time: A Multiyear, Statewide Analysis. *International Journal of Modern Education Studies, (5)*,1, 1-21. http://dx.doi.org/10.51383/ijonmes.2021.61

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INTRODUCTION

Community colleges perform a key role in providing students with opportunities to earn postsecondary credentials, such as a certificate or associate degree. Open admission policies, lower tuition and fees, and the close proximity of community colleges to students' homes and work places have resulted in increased accessibility to postsecondary education (Boggs, 2011; Cohen, Brawer, & Kisker, 2014; Ma & Baum, 2016). In particular, students who have historically encountered barriers to higher education, such as students who are from low-income backgrounds, racial/ethnic minorities, first-generation, and academically underprepared, have benefitted from the presence and growth of community colleges (Boggs, 2011; Cohen et al., 2014; Jabbar, Sánchez, & Epstein, 2017). Given the many characteristics of community colleges that have opened higher education to all students, geographic proximity might be the most crucial factor in school selection. Cohen et al. (2014) reported that the proximity of community colleges to students homes was more important to increasing accessibility than open admissions. Moreover, Jabbar et al. (2017) documented that institutional location was more important for students when examining institutional options and that certain groups of students, such as first-generation and racial/ethnic minorities, often were more constrained by financial and geographical concerns.

Geography is important to students and to the mission and function of community colleges. According to Boggs (2011), community colleges have a "responsibility for the economic development of the communities surrounding the colleges" (p. 3). Additionally, Cohen et al. (2014) described that community college curriculum was developed to support and to assist the needs of the surrounding community. Community colleges often achieve this responsibility to the community by offering a wide range of educational opportunities. Such services include (a) non-credit courses for certifications and personal development, (b) developmental courses to increase mathematic and writing skills, (c) pathways for transferring to a 4-year college, and (d) associate and bachelor's degrees (Boggs, 2011; Cohen et al., 2014; Nuñez et al., 2011; Sanchez & Smith, 2017).

Associated with this mission to the local community, community colleges often enroll students from diverse demographic and educational backgrounds. According to the American Association of Community Colleges (2018), of the students who enrolled in community colleges in the fall 2016 semester, more than one half were a racial/ethnic minority, more than one third were first-generation, more than one third over the age of 25, and more than one half were female. Specifically, 63% of students who enrolled in community colleges enrolled part-time, and 59% of students enrolled in credit-level courses. In Texas, the diversity of students who enrolled in community colleges reflected the national data. In the fall 2015 semester, approximately 66% of students were an ethnic/racial minority, nearly 30% were over the age of 25, 57% of students were female, and 76% of students were enrolled part-time (Texas Higher Education Coordinating Board, 2018).

Given these trends in student enrollment, both nationally and in Texas, examining the characteristics of students might provide a better understanding of the community college population and how those characteristics are related to enrollment and persistence. As previously mentioned, more than one-third of students who enrolled in community college were first-generation students. Some attributes associated with first-generation students when compared to non-first-generation students were (a) racial/ethnic minority, (b) more dependent on financial aid, (c) more likely to have additional responsibilities (e.g., familial dependents, employment), (d) more likely from a low socioeconomic status, and (e) more likely to not be college ready in mathematics, reading, and writing (Ampaw, Partlo, Hullender, & Wagner, 2015; Atherton, 2014; Fike & Fike, 2008; Harlow & Bowman, 2016; Lee, 2017; Ma & Baum, 2016). Further, first-generation students often perceive more barriers in higher education than non-first-generation students. Some perceived barriers included lack of faculty support, difficulty integrating into the college setting, and lack of understanding the cultural and academic norms of a college (Ampaw et al., 2015; Harlow & Bowman, 2016; Longwell-Grice, Adsitt, Mullins, & Serrata, 2016).

In particular, the challenges associated with financial aid and the affordability of college encountered by many first-generation students is worth examining. As previously mentioned, community colleges often attract students from low-income backgrounds because of lower tuition and fees when compared to 4-year institutions. Ma and Baum (2016) reviewed national data and determined that public, community college tuition and fees were approximately $6,000 lower than in-state, public 4-year college tuition and fees. Although community colleges represent a cheaper alternative to higher education, many students, including first-generation students, still struggle with managing the cost of college. Longwell-Grice et al. (2016) examined the perceptions of first-generation students toward college enrollment and their first-year experience and documented that money was commonly viewed by students as a barrier. Often, first-generation students qualify for various forms of financial aid to assist with financial difficulties but encounter other problems. McKinney and Novak (2015) indicated that many first-year students do not submit or submit late the free application for federal student aid, resulting in the loss or lowering of federal financial aid. Longwell-Grice et al. (2015) noted that financial aid, when present, frequently was not sufficient to cover all expenses, especially non-academically-related expenses, such as transportation, food, and rent. Associated with these financial issues, first-generation students were more likely to enroll in community colleges on a part-time basis (Ampaw et al., 2015).

Considering the financial difficulties many students, such as first-generation students, encounter and the lack or insufficiency of financial aid, many students work while enrolled in community colleges. The need to work while enrolled in community college might be a substantial reason why part-time student enrollment is high. Part-time enrollment of community colleges students has increased over the past few decades due, in

part, to more students working while enrolled in college (Cohen et al., 2014; Fike & Fike, 2008). According to the American Association of Community Colleges (2018), 63% of students who enrolled in community colleges during the fall 2016 semester were enrolled as part-time students. Moreover, Ma and Baum (2016) determined that 71% of part-time students who were enrolled in public, 2-year institutions were employed, with 38% of these students working full-time. The large number of students who worked while enrolled in college often resulted in increased difficulties balancing personal and academic responsibilities (Harlow & Bowman, 2016). Lee (2017) discussed that students prioritized work duties over academic duties and that students were not willing to decrease their income to enroll or to remain in college. These financial and work-school balance difficulties might influence community college student enrollment, persistence, and completion rates. Part-time students exhibited lower persistence rates and higher dropout rates when compared to full-time students (Ampaw et al., 2015; Harlow & Bowman, 2016; Klempin, 2014; Lee, 2017; Sanchez, Lowman, & Hill, 2018).

Financially-related and work-related issues might not be the only reasons why part-time student enrollment has increased and continues to be high in community colleges. In addition to work-related concerns, many students who enroll in community colleges experience other obligations, such as familial dependents, lack of academic skills (e.g., time management, lack of confidence), and lack of academic expectations (Ampaw et al., 2015; Lee, 2017). In a recent investigation, Lee (2017) analyzed specific challenges and barriers that part-time students perceived when enrolled in community colleges. Lee documented that in addition to financial barriers, part-time students often experienced academic and personal challenges. Such academic and personal barriers expressed by the part-time students included a decreased sense of belonging on campus, conflicts between work schedule and limited course offerings, unfamiliarity with academic policies, and difficulties with time management. Specifically, Lee (2017) established that 83% of part-time students identified the inability to balance personal responsibilities and academic responsibilities as a major challenge when enrolled in community college.

Another potential factor that has resulted in the increase in part-time student enrollment at community colleges is gender. Cohen et al. (2014) determined that female student enrollment has increased and this increase in female enrollment, in part, has led to an increase in part-time enrollment. From 2000 to 2016, female student enrollment in community colleges increased by 30% (National Center for Education Statistics, 2017) and in the fall 2016 semester, female students represented more than one half of the student population in both national and Texas community colleges (American Association of Community Colleges, 2018; Texas Higher Education Coordinating Board, 2017). Academically, female students often exhibit higher GPAs, higher completion and graduation rates, and greater coping skills when compared to males enrolled in community colleges (Heller & Cassady, 2017; Juszkiewicz, 2017). However, female students tend to

have more factors unrelated to academic variables that force them to enroll part-time. Heller and Cassady (2017) addressed the perceived challenges and barriers of first-year male and female community college students. They established that females identified higher levels of academic anxiety and perceived barriers compared to males and that females identified family concerns as their primary concern whereas males indicated work was their primary barrier. In their study, females described increased barriers involving family issues, such as health of dependents, childcare, and family responsibilities than was described by males (Heller & Cassady, 2017).

In an effort to ameliorate some of the difficulties these first-time-in-college, part-time students encounter and to support these students, Texas enacted two educational programs. Closing the Gaps by 2015: The Texas Higher Education Strategic Plan (Closing the Gaps), an educational initiative between the 2000 and 2015 academic years, sought to enhance student participation rates and to improve student completion rates in Texas higher education institutions (Texas Higher Education Coordinating Board, 2005). One aspect of this initiative was focused on ensuring the affordability of higher education in Texas by providing more grants and scholarships based on financial need and by monitoring tuition and fees at postsecondary institutions to avoid deterring student enrollment. Building on Closing the Gaps, Texas Higher Education Strategic Plan: 2015–2030: 60x30TX (60x30) is a Texas educational initiative to increase student completion rates in postsecondary institutions to 60% by 2030 (Texas Higher Education Coordinating Board, 2015). Although the primary goal of 60x30 is to increase student completion, another important aspect of this program is to limit student loan debt. Considering the financial instability that many students encounter, particularly first-time-in-college and part-time students, these educational approaches might have improved student completion.

Statement of the Problem

As previously discussed, part-time students comprise a substantial portion of students who enroll in community colleges and a considerable percentage of these part-time students are employed because of issues surrounding the affordability of college. Often, low-income students enroll in community colleges due to lower tuition and fees compared to 4-year institutions, yet these students still struggle to afford both college and personal expenses, requiring these students to work (Ma & Baum, 2016). As Lee (2017) mentioned, for part-time students, the income provided by their employment was more important and took precedence over enrolling and persisting in community college. Given these financial difficulties, financial aid could play a major role in facilitating part-time student enrollment and assisting their success once enrolled. However, many part-time, community college students encounter difficulties associated with financial aid, in particular, applying for financial aid and receiving enough financial aid. McKinney and Novak (2014) discussed that many low-income students who qualified for financial aid did not complete the free application for federal student aid. Ma and Baum (2016) indicated that community college students who had the greatest financial need, often, were less likely to apply for financial aid. Even when part-time students apply for financial aid, frequently the financial aid is

unavailable or insufficient to support all costs associated with an individual student. As part-time students enroll in fewer credit hours, often, they do not qualify for the full amount of federal financial aid, which requires a student be enrolled for 12 credit hours per semester (Klempin, 2014). Therefore, the amount of financial aid available for part-time students is limited. Moreover, even if part-time students receive enough financial aid to cover all academically-related expenses, this financial aid, often, does not completely cover personal expenses, causing the student to work. As Longwell-Grice et al. (2016) affirmed, financial aid often did not cover expenses associated with college, such as transportation and rent.

The lack of applying for financial aid, the lack of sufficient financial aid to cover all expenses, and the need to work by part-time students might influence their enrollment and completion rates. Part-time students have exhibited higher rates of attrition and lower rates of graduation compared to full-time students often due to multiple conflicting obligations, such as work and family (Ampaw et al., 2015; Natale & Jones, 2017). Further, Juszkiewicz (2017) reported that part-time students enrolled in community colleges had a completion rate of 20.4% and first-time-in-college, part-time students had an even lower completion rate of 17.0%. She further determined that part-time students who did not complete were likely to re-enroll but at a different institution. Therefore, by analyzing the enrollment trends of first-time-in-college, part-time students, educational administrators and policymakers could establish the effectiveness of current educational measures to assist and promote student completion at community colleges and to provide an affordable education at community colleges.

Purpose of the Study

The purpose of this investigation was to determine the percentages of male and female first-time-in-college students who were enrolled part-time in Texas community colleges. Specifically, the changes among male and female first-time-in-college, part-time students who were enrolled in Texas community colleges in the 2003-2004 academic year through the 2018-2019 academic year were identified. Analyses were performed to ascertain the extent to which the enrollment percentages of female and male Texas community college first-time-in-college, part-time in college students had changed between the 2003-2004 and the 2018-2019 academic years.

Significance of the Study

Given the substantial number of part-time students who enroll in community colleges and the poor completion rates among these students, particularly first-time-in-college, part-time students, examining the effectiveness of educational policies that guide community college practices toward first-time-in-college, part-time students should be investigated. Texas policies, such as Closing the Gaps and 60x30, were designed to increase student enrollment and completion, yet community college completion rates continue to be low, especially among part-time students. McKinney and Hagedorn (2017) indicated that the success of these educational initiatives will rely heavily on the improvement of student success at community colleges because more than one half of students enrolled Texas postsecondary institutions are attending community colleges. Therefore, the thorough

examination of these programs might identify effective practices to increase student enrollment and completion as well as ineffective strategies that might hinder student enrollment and completion in Texas community colleges. Through the identification of successful measures and practices, community college administrators and state legislators can design and implement new educational initiatives to support and improve student success further.

Moreover, community colleges are under additional pressure to increase student success rates because of recent legislation that ties state funding to student success (Natale & Jones, 2018). In 2013, Texas endorsed a performance-based funding model for postsecondary institutions, including community colleges, which apportioned 10% of funding on the outcomes of certain student performance metrics (McKinney & Hagedorn, 2017; Natale & Jones, 2018). Some of the metrics that determine institutional funding are: completing developmental courses, achieving semester hour benchmarks (e.g., 15 hours, 30 hours), and attaining a degree or certificate (McKinney & Hagedorn, 2017). Considering the consequence of student performance on funding and the importance to demonstrate to lawmakers and the general public the validity and worth of community colleges, administrators should identify and implement effectual strategies to assist student enrollment, persistence, and graduation rates.

Research Questions

The research questions addressed in this investigation were (a) What is the gender diversity of Texas community college first-time-in-college, part-time students?; (b) What is the difference in the enrollment percentages of Texas female community college first-time-in-college, part-time students between the 2003-2004 and the 2011-2012 academic years, between the 2011-2012 and the 2018-2019 academic years, and between the 2003-2004 and the 2018-2019 academic years?; (c) What is the difference in the enrollment percentages of Texas male community college first-time-in-college, part-time students between the 2003-2004 and the 2011-2012 academic years, between the 2011-2012 and the 2018-2019 academic years, and between the 2003-2004 and the 2018-2019 academic years?; (d) What trends were present in the gender diversity of first-time in college part-time students enrolled in Texas community college first-time-in-college, full-time students in the 2003-2004 through the 2018-2019 academic years?; and (e) Which community colleges exhibited the greatest percent differences in first-time-in-college, part-time students between the 2003-2004 academic year and the 2018-2019 academic year? The first research question was repeated for the 2003-2004 through the 2018-2019 academic years whereas the remaining research questions, with the exception of the trends questions, were addressed for three academic year comparisons. The trend questions involved all 16 academic years of data.

METHOD

Research Design

A non-experimental, causal-comparative research design was used for this empirical investigation (Creswell & Creswell, 2018; Johnson & Christensen, 2017). An archival dataset was examined to ascertain the degree to which differences might be present in the percentages of male and female, first-time-in-college, part-time students at Texas community colleges. Because both the independent variable and the dependent variables had occurred previously, other variables that might have been present and that might have influenced the dependent variable could not be examined in this study (Creswell & Creswell, 2018).

The particular academic years in which male and female students were enrolled in Texas community colleges were the independent variable in this empirical study. Data were analyzed for the 2003-2004 through the 2018-2019 academic years. In this investigation, the dependent variables were the percentages of student enrollment who were male and the percentages of student enrollment who were female students and who were enrolled in Texas community colleges during this period. Only data on students who were first-time-in-college, part-time students enrolled in Texas community colleges were analyzed from the 2003-2004 through the 2018-2019 academic years.

Participants and Instrumentation

Participants in this study were first-time-in-college, part-time students who enrolled in a Texas community college between the 2003-2004 and the 2018-2019 academic years. Archival data for all Texas community colleges were acquired from the Texas Higher Education Coordinating Board Interactive Accountability System for these academic years. Individual community colleges report all data, such as student enrollment numbers, student enrollment status (i.e., full-time, part-time, and both) and student demographic information, obtained from the Texas Higher Education Coordinating Board. These data compiled by the Texas Higher Education Coordinating Board were publicly available through the Texas Higher Education Coordinating Board Interactive Accountability System. A total of 16 years of data were examined for this study.

Data Analysis

The Texas Higher Education Coordinating Board links gender and enrollment status of students with the academic year and with first-time-in-college status, therefore paired samples t-tests were used in this study. Parametric paired sample t-tests were determined to be appropriate because the majority of the underlying assumptions for this inferential statistical procedure were met (Slate & Rojas-LeBouef, 2011). Results will now be reported by research question.

RESULTS

Results for Research Question One

To answer the first research question, "What are the enrollment percentages of male and female first-time-in-college, part-time students in Texas community colleges from the 2003-2004 academic year through the 2018-2019 academic year?" descriptive statistics were calculated. As revealed in Tables 1 and 2, part-time male and female enrollment percentages over this 16-year period were quite consistent. The part-time, male, first-time-in-college Texas community college enrollment rates ranged from a low of 42.51% in the 2003-2004 academic year to a high of 46.48% in the 2009-2010 academic year. Accordingly, the part-time, male enrollment of first-time-in-college Texas community college students varied by only 3.97 percentage points in this 16-year period. The part-time, female, first-time-in-college Texas community college enrollment rates ranged from a low of 53.52% in the 2009-2010 academic year to a high of 57.49% in the 2003-2004 academic year. As such, the part-time, female enrollment of first-time-in-college Texas community college students varied by only 3.97 percentage points in this 16-year period.

Table 1

Descriptive Statistics for Texas Male, Part-time, First-Time-in-College Students Community College Students Between the 2003-2004 and 2018-2019 Academic Years

Academic Year	*n* of community colleges	*M%*	*SD%*
2003-2004	69	42.51	6.32
2004-2005	69	44.93	7.03
2005-2006	69	44.26	5.84
2006-2007	69	45.21	6.44
2007-2008	70	44.78	7.94
2008-2009	70	45.40	8.60
2009-2010	71	46.48	8.42
2010-2011	71	45.81	6.96
2011-2012	71	44.12	7.85
2012-2013	72	44.15	6.58
2013-2014	72	45.12	6.17
2014-2015	72	44.87	7.02
2015-2016	72	45.74	6.15

2016-2017	72	46.26	7.66
2017-2018	72	44.13	7.56
2018-2019	72	43.42	7.50

Table 2

Descriptive Statistics for Texas Female, Part-time, First-Time-in-College Students Community College Students Between the 2003-2004 and 2018-2019 Academic Years

Academic Year	*n* of community colleges	*M*%	*SD*%
2003-2004	69	57.49	6.32
2004-2005	69	55.07	7.03
2005-2006	69	55.74	5.84
2006-2007	69	54.79	6.44
2007-2008	70	55.22	7.94
2008-2009	70	54.60	8.60
2009-2010	71	53.52	8.42
2010-2011	71	54.19	6.96
2011-2012	71	55.88	7.85
2012-2013	72	55.85	6.58
2013-2014	72	54.88	6.17
2014-2015	72	55.13	7.02
2015-2016	72	54.26	6.15
2016-2017	72	53.74	7.66
2017-2018	72	55.87	7.56
2018-2019	72	56.58	7.50

Results for Research Question Two

To answer the second research question, "What is the difference in the enrollment percentages of Texas female community college first-time-in-college, part-time students between the 2003-2004 and the 2011-2012 academic years, between the 2011-2012 and the

2018-2019 academic years, and between the 2003-2004 and the 2018-2019 academic years?", three paired samples t-tests were calculated. For the 2003-2004 and 2011-2012 academic year comparisons, a statistically significant difference was revealed in part-time, female enrollment percentages, t(68) = 1.97, p = .05. The difference represented a small effect size (Cohen's d) of 0.22 (Cohen, 1988). A statistically significantly lower enrollment rate was present for Texas part-time, female, first-time-in-college students in the 2003-2004 academic year, 57.49%, than in the 2011-2012 academic year, 55.93%, a difference of 1.56%. Between the 2011-2012 and 2018-2019 academic years, a statistically significant difference in part-time, female enrollment percentages, t(69) = -0.70, p = .49, was not present. In the 2011-2012 and the 2018-2019 academic years, the enrollment rates of Texas part-time, female, first-time-in-college students were 55.94% and 56.73%, respectively. Lastly, between the 2003-2004 and 2018-2019 academic years, a statistically significant difference was not present in Texas part-time, female enrollment percentages, t(67) = 0.90, p = .37. Part-time, female enrollment percentages were 57.64% and 56.70% in the 2003-2004 and 2018-2019 academic years, respectively. Table 3 contains the descriptive statistics for these analyses.

Table 3

Descriptive Statistics for Texas Female, Part-time, First-Time-in-College Students Community College Students for the Beginning Point, Midpoint, and Ending Points

Academic Year	*n* of community colleges	*M%*	*SD%*
2003-2004	69	57.49	6.32
2011-2012	70	55.94	7.88
2018-2019	68	56.70	7.52

Results for Research Question Three

Regarding the third research question, "What is the difference in the enrollment percentages of Texas male community college first-time-in-college, part-time students between the 2003-2004 and the 2011-2012 academic years, between the 2011-2012 and the 2018-2019 academic years, and between the 2003-2004 and the 2018-2019 academic years?", three paired samples t-tests were calculated. For the 2003-2004 and 2011-2012 academic year comparisons, a statistically significant difference was yielded in part-time, male enrollment percentages, t(68) = -1.97, p = .05. The effect size (Cohen's d) was small, 0.22 (Cohen, 1988). A statistically significantly higher enrollment rate was present for Texas part-time, male, first-time-in-college students, 42.51%, in the 2003-2004 academic year than in the 2011-2012 academic year, 44.07%, a difference of 1.56 percentage points. Between the 2011-2012 and 2018-2019 academic years, a statistically significant difference in part-time, male enrollment percentages, t(69) = 0.70, p = .49, was not present. In the 2011-2012 and the 2018-2019 academic years, the enrollment rates of Texas full-time, male, first-time-in-college students were 44.06% and 43.27%, respectively. Lastly, between the 2003-2004 and 2018-2019 academic years, a statistically significant difference was not present in Texas part-time, male enrollment percentages, t(67) = -0.90, p = .37. Part-time, male enrollment percentages were

42.36% and 43.30% in the 2003-2004 and 2018-2019 academic years, respectively. Revealed in Table 4 are the descriptive statistics for these analyses.

Table 4

Descriptive Statistics for Texas Male, Part-time, First-Time-in-College Students Community College Students for the Beginning Point, Midpoint, and Ending Points

Academic Year	*n* of community colleges	*M%*	*SD%*
2003-2004	69	42.51	6.32
2011-2012	70	44.06	7.88
2018-2019	68	43.30	7.52

Results for Research Question Four

In reference to the fourth research question, "What trends were present in the gender diversity of first-time-in-college, part-time students enrolled in Texas community college first-time full-time students in the 2003-2004 through the 2018-2019 academic years?", descriptive statistics were calculated. Depicted in Figure 1 are the enrollment trends over time of male and female, part-time, first-time-in-college Texas community college students for the 2003-2004 academic year through the 2018-2019 academic year. Part-time, first-time-in-college, female enrollment rates were slightly higher than part-time, first-time-in-college, male enrollment rates for every academic year. Both male and female enrollment rates over time remained relatively consistent over the 16-year span.

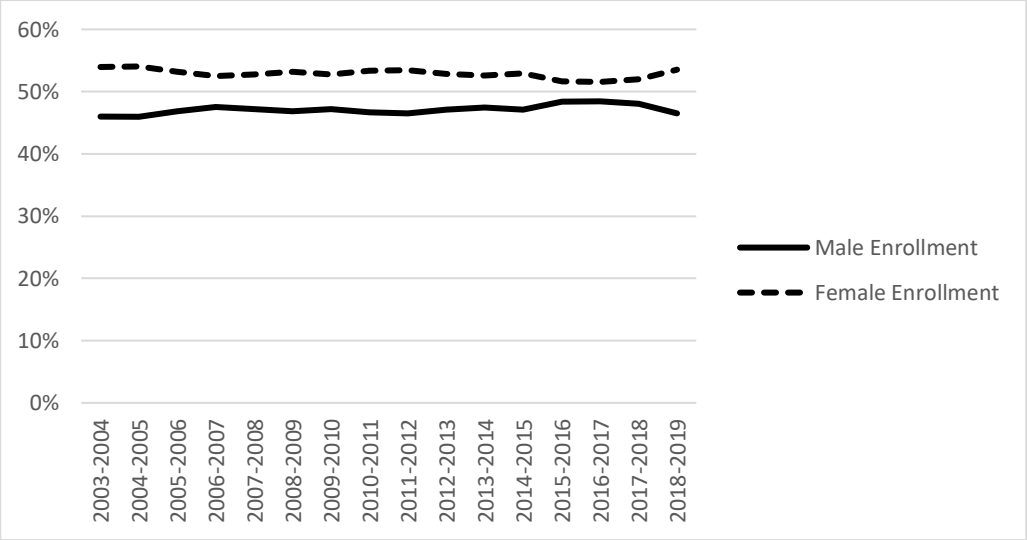

Figure 1.

Total enrollment rates of male and female, part-time, first-time-in-college Texas community college students for the 2003-2004 academic year through the 2018-2019 academic year.

Results for Research Question Five

To answer the fifth research question, "Which community colleges exhibited the greatest percent differences in first-time-in-college, part-time students between the 2003-2004 academic year and the 2018-2019 academic year?", descriptive statistics were calculated separately for male and female students. As revealed in Table 5, Southwest Collegiate Institute for the Deaf had the greatest percent increase of 44% for male, first-time-in-college, part-time enrollment in Texas community colleges, between the 2003-2004 academic year and the 2018-2019 academic year. Following Southwest Collegiate Institute for the Deaf were Trinity Valley Community College (15%) and Southwest Texas Junior College (14%).

Table 5

Descriptive Statistics of the Top Ten Texas Community Colleges with the Greatest Increase in Texas Male, Part-time, First-Time-in-College Students Between the 2003-2004 and 2018-2019 Academic Years

Texas Community College	*M*% Change
Southwest Collegiate Institute for the Deaf	44.0
Trinity Valley Community College	15.0
Southwest Texas Junior College	14.0
Alvin Community College	10.0
Texas Southmost College	10.0
Dallas County Community College-Cedar Valley College	9.0
Blinn College District	9.0
Ranger College	8.0
San Jacinto College–North Campus	7.0
Navarro College	7.0

For female, first-time-in-college, part-time enrollment in Texas community colleges, Western Texas College had the greatest percent increase of 22% from the 2003-2004 academic year to the 2018-2019 academic year. Coastal Bend College (16%) and Victoria College (14%) were second and third respectively. Table 6 contains the descriptive statistics.

Table 6

Descriptive Statistics of the Top Ten Texas Community Colleges with the Greatest Increase in Texas Female, Part-time, First-Time-in-College Students Between the 2003-2004 and 2018-2019 Academic Years

Texas Community College	*M*% Change
Western Texas College	22.0
Coastal Bend College	16.0
Victoria College	14.0
Panola College	13.0
Angelina College	12.0
Northeast Texas Community College	9.0
South Plains College	8.0
Del Mar College	8.0
Weatherford College	8.0
Tyler Junior College	8.0

DISCUSSION

In this multiyear statewide study, enrollment rates for male and female, first-time-in-college students enrolled part-time in Texas community colleges from the 2003-2004 academic year through the 2018-2019 academic year were reviewed. For 16 academic years, the enrollment rates for both male and female, part-time, first-time-in-college students changed by 3.97 percentage points. In the 2003-2004 academic year, part-time male, first-time-in-college students enrollment rates reached a low of 42.51% and in the 2009-2010 academic year a high of 46.48%. Enrollment rates for part-time female, first-time-in-college students in Texas community college were lowest in the 2009-2010 academic year (53.52%) and highest in the 2003-2004 academic year (57.49%). Overall, enrollment rates were relatively unchanged for both male and female, part-time, first-time-in-college students enrolled in Texas community colleges.

A statistically significant difference ($p = .05$) was determined for the enrollment rates of both male and female, part-time, first-time-in-college students enrolled in Texas community colleges between the 2003-2004 academic year and the 2011-2012 academic year. However, enrollment rates for all other years were quite consistent and did not result in any statistically significant differences. Over the 16 academic years, enrollment rates increased by 0.91 percentage points for part-time male, first-time-in-college students at Texas community colleges. During the same timeframe, enrollment rates decreased by 0.91 percentage points for part-time female, first-time-in-college students at Texas community

colleges. Enrollment rates for part-time male, first-time-in-college students at Texas community colleges averaged 44.82% over the 16 academic years and for part-time female, first-time-in-college students at Texas community colleges averaged 55.18% over the 16 academic years.

Connections with Existing Literature

Enrollment rates for part-time, male and female, first-time-in-college students were fairly consistent between the 2003-2004 academic year and the 2018-2019 academic year, as revealed by the findings of this multiyear, statewide investigation. Part-time female, first-time-in-college enrollment rates were higher than part-time male, first-time-in-college students who enrolled in Texas community colleges and these results were congruent with the findings of other researchers (American Association of Community Colleges, 2018; Ampaw et al., 2015; Cohen et al., 2014; Texas Higher Education Coordinating Board, 2017). According to Ampaw et al. (2015) observed that male, first-time-in-college students exhibited lower enrollment rates in community colleges than female, first-time-in-college students. Additionally, Cohen et al. (2014) noted that female students who enrolled in community colleges were more likely to enroll part-time than full-time when compared to male students. Heller and Cassady (2017) reported that first-year, female students frequently perceived more barriers than male first-year students enrolled in community colleges leading to higher part-time enrollment by female students. Lastly, the Texas Higher Education Coordinating Board (2017) determined that more than half of part-time student enrollment in Texas community colleges were female students. As revealed by the findings of this study, the enrollment rates of part-time female students in Texas community colleges averaged 55.18%.

Implications for Policy and for Practice

Several implications for policy and practice can be made based upon the findings of this multiyear, statewide investigation, in which the enrollment rates of part-time male and female, first-time-in-college students in Texas community colleges were determined. From the 2003-2004 academic year to the 2018-2019 academic year, part-time, male and female, first-time-in-college student enrollment rates over remained mostly unchanged. First, community colleges should examine current strategies for the recruitment and enrollment of part-time, first-time-in-college students. Lee (2017) noted that part-time students often experienced greater difficulty transitioning into community college than full-time students. Therefore, community colleges should provide additional support and resources to part-time students to help ease this transition and provide professional development and training to college employees in departments, such as advising, financial aid, and faculty, who frequently interact with part-time students. Second, community colleges should work to ameliorate the effects of non-academic barriers, such as childcare, food insecurity, and transportation difficulties, as these barriers often prevent students from enrolling in community colleges or remaining enrolled in community colleges (Heller & Cassady, 2017; Lee, 2017).

Third, given that part-time enrollment is associated with lower success and persistence rates (Juszkiewicz, 2017; Klempin, 2014), policymakers and community college administrators need to identify meaningful and specific interventions to support and retain part-time students. Fourth, community colleges should determine methods to increase the engagement and integration of part-time students into the academic environment. Lee (2017) reported that part-time, community college students identified a lack of connection and belonging as a serious challenge to their education. Therefore, measures should be developed and implemented to better incorporate part-time students into the community college environment, as well as encourage a sense of belonging within in the community college. Finally, community colleges should work to develop degree plans and course schedules that accommodate part-time student schedules. Part-time community college students reported a lack of options, regarding courses and degree plans (Lee, 2017) and community college administrators should be cognizant of part-time student availability when building course schedules.

Recommendations for Future Research

Based upon the findings of this Texas, statewide investigation, various recommendations for future research can be made regarding the enrollment rates of part-time, male and female, first-time-in-college students. First, given that only data from Texas community colleges were examined for this investigation, researchers should determine if other states have similar enrollment rates. Due to this study being based solely on Texas community college, part-time, first-time-in-college students, the degree to which the findings would be generalizable to part-time, first-time-in-college students in other states is unclear. Second, further investigation is needed in regard to the enrollment rates of part-time, first-time-in-college students at 4-year postsecondary institutions. In this study, only community college enrollment rates of part-time male and female, first-time-in-college students were determined. Therefore, the extent to which the findings would be generalizable to 4-year institutions is unknown. Third, researchers are encouraged to examine the enrollment rates of part-time male and female students who are not first-time-in-college students to determine if any connections exist between these two groups. Fourth, further research is recommended into the influence of other factors, such as race/ethnicity, age, and employment status, on part-time male and female, first-time-in-college enrollment rates. Given that in this investigation, only the influence of gender on the enrollment rates of part-time, first-time-in-college students were examined, the degree to which these other characteristics might affect enrollment rates in Texas community colleges is unknown. Finally, investigators should conduct studies using mixed methods and/or qualitative research to ascertain underlying causes for the enrollment rates of part-time, first-time-in-college students and to provide further information to aid policymakers in future decisions.

CONCLUSION

In this multiyear, statewide analysis, Texas community college enrollment rates were analyzed for the 2003-2004 academic year through the 2018-2019 academic years for part-time, male and female, first-time-in-college students. Inferential statistical analyses

revealed a statistically significant increase for part-time male, first-time-in-college students between the 2003-2004 academic year and the 2011-2012 academic year. Furthermore, a statistically significant decrease was revealed in the enrollment rates of part-time female, first-time-in-college students between the 2003-2004 academic year and the 2011-2012 academic year. However, other than these two academic years, no statistically significant difference occurred. Part-time male, first-time-in-college students had enrollment rates consistently around 43.29% during the 16 academic years whereas part-time female, first-time-in-college students at Texas community colleges remained fairly constant around 56.71%. Also identified in this article were the Texas community colleges that exhibited the greatest increase in enrollment rates for male and female, part-time, first-time-in-college students over the 16-year period. Southwest Collegiate Institute for the Deaf had the greatest increase in enrollment rates of part-time male, first-time-in-college students, increasing by 44.0% between the 2003-2004 academic year and the 2018-2019 academic year. Western Texas College had the greatest increase in enrollment rates of female, part-time, first-time-in-college students, increasing by 22.0% between the 2003-2004 academic year and the 2018-2019 academic year.

In examining the enrollment rates of part-time, male and female, first-time-in-college students in Texas community colleges over time, the effectiveness of Texas educational policies remains unclear. Statewide educational initiatives, such as Closing the Gaps and 60x30, were designed, at least in part, to increase enrollment rates of first-time-in-college students. Further investigation is needed to determine which approaches were successful in supporting part-time, first-time-in-college student enrollment and which methods were ineffectual in increasing part-time, first-time-in-college student enrollment.

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