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Differences in Persistence Rates Between International Students and Traditional Students in Texas Community Colleges: A Multiyear Analysis

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Abstract: The purpose of this study was to determine the degree to which differences were present in the 1-year persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years. A second purpose was to ascertain the extent to which differences existed in the 2-year persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years. Inferential statistical analyses revealed that International students had statistically significantly lower 1-year persistence rates and 2-year persistence rates than traditional students in all 5 academic years. Implications of these results as well as recommendations for future research are discussed.

Keywords: 1-Year Persistence Rates, 2-Year Persistence Rates, Community College, International Students, Traditional Students

1. Introduction

Many International students come to the United States for education. Specifically, many of these International students come to Texas to enroll in 2-year postsecondary institutions (e.g., community colleges) to earn a college degree. The number of International students has been increasing since the 2007-2008 academic year, from 51,823 International students to 85,166 International students in the 2016-2017 academic year [1]. Moreover, International students create jobs by enrolling in postsecondary institutions in Texas. In the 2016-2017 academic year, a total of 27, 232 jobs were created in Texas. About 52% of these jobs were created in higher education, and the rest of the jobs were created in different sectors such as accommodation and retail [1].

International students who attend community colleges experience challenges that might affect their persistence and graduation rates. These challenges could increase the stress level of these International students. International students tend to have higher Grade Point Average scores when they have low depression rates [2]. Furthermore, International students experience other challenges that might be main

barriers from achieving their educational goals. The two major challenges that many International students experience are caused by having low English proficiency and being unfamiliar with the services that are offered by the community college they attend [3]. However, not only International students experience challenges during their time in college. Traditional students (e.g., White students) also face challenges that might influence their success rates. The fact of the matter is that not all community colleges perform the same way in terms of success rates (i.e., persistence rates and graduation rates).

Alsakran and Slate [4] determined the five Texas community college that had the highest 1-year persistence rates and the five Texas community colleges that had the lowest 1-year persistence rates for International students in three different academic years (i.e., 2010-2011, 2011-2012, and 2012-2013). They concluded that not all Texas community colleges perform similarly with their 1-year persistence rates of International students. Some Texas community colleges (i.e., Victoria College and Lone Star College Cy-Fair) were consistent with having high 1-year persistence rates in the three academic years. In contrast, other Texas community colleges such Central Texas College

were consistent with having low 1-year persistence rates in the same three academic years. Alsakran and Slate [4] assumed that the Texas community colleges that had high 1-year persistence rates provided services and programs that consistently helped their International students to have high 1-year persistence rates. On the other hand, the Texas community colleges that had low 1-year persistence rates did not provide services and programs that could have helped their International students to have higher 1-year persistence rates [4].

In general, community college students face unexpected challenges that might prevent them from succeeding in college [5]. These students might not be focused on school because they spend their time dealing with these challenges on a daily basis [6]. Therefore, nonacademic support such as helping students understand the education system, connect with other students, and improve their social skills could help these students persist in college and could help them earn a college degree. However, nonacademic support should not be a set of standardized mechanisms that are designed to help all students in the same way. In other words, nonacademic support should be different from one student to another based on the help that is needed by each student [5].

According to [7], most students who enroll in technical programs in community colleges are first-generation students. These students have no role models in their families who might influence them and help them during their time in college [7]. Moreover, some students who enroll in community colleges do not earn a college degree [8]. As such, community college leaders need to help these students earn a college degree by providing mentoring programs, developing retention plans, requiring students to declare their majors and create degree plans, and providing mandatory faculty advisement [7].

The success of community college students does not depend only on academic skills, but also depends on nonacademic skills and attitude [9]. These nonacademic skills include noncognitive and social skills such as social relationships, which could help these students succeed because these relationships help them become more connected with their colleges and with their peers [5]. In fact, students who have strong relationships in college tend to be more connected and integrated to the environment of college than the students who lack such relationships [9]. Therefore, these students are more likely to earn a college degree than the students who lack such relationships in college [5].

1.1. Statement of the Problem

Many International students come from different countries from all around the world to the United States to pursue their higher education in postsecondary institutions (e.g., Texas community colleges). Many of these International students experience different challenges such as not having a full understanding of the education system. These challenges might influence their 1-year persistence rates and 2-year

persistence rates. Therefore, many of these International students might not graduate from college and might not achieve their educational goals. Understanding the possible reasons of why International students do not persist through the 1-year and 2-year of college compared to other students (e.g., Traditional students) might help Texas community college leaders offer programs and services that might help International students persist through college.

1.2. Significance of the Study

Offering supportive programs that could help International students academically and socially during their time in college is important [10]. Some International students struggle during their time in college and might not persist through the 1-year and 2-year of college. Determining the degree to which differences might be present in the 1-year persistence rates and 2-year persistence rates between International students and traditional students is important because Texas community college leaders need to be aware of these differences. If having high persistence rates is a good indicator of knowing whether International students would graduate from college or not, then helping these students to have higher persistence rates would be something necessary for Texas community colleges. Such information could help Texas community colleges to generate programs and services to improve the persistence rates of their International students. This study will be an addition to the existing literature about International students.

1.3. Purpose of the Study

The purpose of this study was to determine the degree to which differences were present in 1-year persistence rates between International students and traditional students in five academic years (i.e., from 2009-2010 through 2013-2014). A second purpose was to ascertain the extent to which differences existed in 2-year persistence rates between International students and traditional students in five academic years (i.e., from 2009-2010 through 2013-2014). By analyzing five years of statewide data, the degree to which changes might have occurred in the persistence rates, both 1-year and 2-year, of International students and traditional students in Texas community colleges can be determined.

1.4. Research Questions

Two research questions were addressed in this investigation: (a) What is the difference in the 1-year total persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years? and (b) What is the difference in the 2-year total persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years?

2. Method

2.1. Research Design

A causal-comparative design was used as a research design for this study [11]. The data that were used in this study were archival data that were obtained from the Texas Higher Education Coordinating Board Interactive Accountability System. An assumption was made that the archival data that were obtained were accurate and free of errors. This assumption was believed to be appropriate because of the audits conducted by the Texas Higher Education Coordinating Board on the data provided to it by individual community colleges.

2.2. Procedures and Participants

Participants in this study were 71 Texas community colleges that provided data for 1-year persistence rates and for 2-year persistence rates for International students and traditional students in Texas community colleges in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years. The data were obtained from the Texas Higher Education Coordinating Board Interactive Accountability System, which is an organization that is responsible of providing data on higher educational institutions in Texas. The two tools that were used in this study to analyze the data were the Statistical Package for Social Sciences and Microsoft Excel.

2.3. Definition of Terms

In this study, four terms are important to define: 1-year persistence rates, 2-year persistence rates, International students, and traditional students. Persistence rates were defined in this study as the percentages of International students and traditional students who completed their first year in college, 1-year persistence rates, and the percentages of student who completed their first two years of college, 2-year persistence rates [12]. International students were defined as students who were not U.S. citizens and who were in the United States temporarily for their studies [13]. Traditional students were defined as all students who were enrolled in a Texas community college, other than students who were defined as being an International student.

3. Results

Before conducting inferential statistics to answer the research questions, checks were performed to determine whether these data were normally distributed. Of the 40 standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the standardized kurtosis coefficients (i.e., the kurtosis value divided by its standard error), 40 standardized coefficients were within the limits of normality, +/- 3 [14]. Neither the Box's Test of Equality of Covariance assumption was met, nor the Levene's Test of Error Variance assumption met for the 1-year persistence rates and 2-year persistence rates for all academic years.

Even though all assumptions were not met, [15] contends that Multivariate Analysis of Variance (MANOVA) procedure is adequately robust that this violation can be tolerated.

To determine whether a statistically significant difference was present in the 1-year persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years, a MANOVA procedure was calculated. The result was statistically significant, Wilks' Λ =.79, p <.001, partial η^2 =.22, large effect size [16]. Univariate follow up analysis of variance procedures revealed statistically significant differences in 1-year persistence rates between International students and traditional students in all five academic years: 2009-2010 comparison, $F(1, 140)$ = 8.40, p =.004, partial η^2 =.06, moderate effect size; 2010-2011 comparison, $F(1, 140)$ = 17.90, p <.001, partial η^2 =.11, moderate effect size; 2011-2012 comparison, $F(1, 140)$ = 13.84, p <.001, partial η^2 =.09, moderate effect size; 2012-2013 comparison, $F(1, 140)$ = 3.90, p =.05, partial η^2 =.03, small effect size; and the 2013-2014 comparison, $F(1, 140)$ = 17.13, p <.001, partial η^2 =.10, small effect size [16].

International students had statistically significantly lower 1-year persistence rates in all academic years than did traditional students. The largest difference between International students and traditional students was 16.87 percentage points in the 2010-2011 academic year. The second largest difference between International students and traditional students was 16.86 percentage points in the 2013-2014 academic year. The smallest difference between International students and traditional students was 7.55 percentage points in the 2012-2013 year.

The descriptive statistics for the 1-year persistence rates for these five academic years are presented in Table 1.

Table 1. Descriptive Statistics for 1-Year Persistence Rates for International Students and Traditional Students.

Academic Year	M%	SD%
2009-2010		
International	50.85	32.90
Traditional	62.40	7.06
2010-2011		
International	44.11	32.90
Traditional	61.00	6.95
2011-2012		
International	48.00	31.90
Traditional	62.40	4.14
2012-2013		
International	56.23	31.60
Traditional	63.80	6.46
2013-2014		
International	48.33	33.64
Traditional	65.19	6.77

Note. The sample size of community colleges in these years was 71.

To determine whether a statistically significant difference was present in the 2-year persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years, a MANOVA procedure was calculated. The

result was statistically significant, Wilks' Λ =.68, p <.001, partial η^2 =.32, large effect size [16]. Univariate follow up analysis of variance procedures revealed statistically significant differences in persistence rates between International students and traditional students in all five academic year comparisons: 2009-2010 comparison, $F(1, 140) = 35.75$, p <.001, partial η^2 =.20, large effect size; 2010-2011 comparison, $F(1, 140) = 23.20$, p <.001, partial η^2 =.14, large effect size; 2011-2012 comparison, $F(1, 140) = 40.90$, p <.001, partial η^2 =.23, large effect size; 2012-2013 comparison, $F(1, 140) = 19.38$, p <.001, partial η^2 =.12, moderate effect size; and the 2013-2014 comparison, $F(1, 140) = 23.92$, p <.001, partial η^2 =.15, large effect size [16].

International students had statistically significantly lower 2-year persistence rates in all academic years than traditional students. The largest difference between International students and traditional students was 22.14 percentage points in the 2009-2010 academic year. The second largest difference between International students and traditional students was 19.59 percentage points in the 2011-2012 academic year. The smallest difference between International students and traditional students was 16.54 percentage points in the 2010-2011 academic year. Table 2 contains the descriptive statistics for the 2-year persistence rates over time of International students and traditional students.

Table 2. *Descriptive Statistics for 2-Year Persistence Rates for International Students and Traditional Students.*

Academic Year	M%	SD%
2009-2010		
International	27.51	30.16
Traditional	49.65	8.00
2010-2011		
International	30.30	27.80
Traditional	46.80	8.13
2011-2012		
International	27.00	24.40
Traditional	46.60	8.51
2012-2013		
International	31.84	30.60
Traditional	48.40	8.27
2013-2014		
International	32.92	29.11
Traditional	50.44	7.95

Note. The sample size of community colleges in these years was 71.

4. Discussion

Data for 71 Texas community colleges were analyzed in this study to determine the extent to which differences were present in 1-year persistence rate and 2-year persistence rates between International students and traditional students in the 2009-2010, 2010-2011, 2011-2012, 2012-2013, and 2013-2014 academic years. Inferential statistical procedures revealed that statistically significant differences were present in 1-year persistence rates and 2-year persistence rates between International students and traditional students in all academic years. International students had statistically significantly lower 1-year persistence rates and 2-year

persistence rates in all five academic years (i.e., from 2009-2010 through 2013-2014) than traditional students. Moreover, much more variability was present in the persistence rates of International students as their *SD*s were three times more than the *SD*s of traditional students in all academic years. Therefore, unlike International students, consistency was present in the 1-year persistence rates and 2-year persistence rates of traditional students.

Several reasons may explain why International students had statistically lower 1-year persistence rates and 2-year persistence rates than traditional students. One possibility is that Texas community colleges did not have programs and services that supported the needs of International students [4]. A second possibility is that International students were at a disadvantaged compared to traditional students. That is, International students might not have had the same financial support and family support as what traditional students might had. A third likelihood is that these International students might not have planned to graduate from college at all. Rather, they did not care about persisting in college because they did not enroll in Texas community colleges to earn a degree in the first place but were only enrolled to maintain their legal status in the United States [17].

5. Conclusion

Future researchers are encouraged to investigate these factors to understand why International students have lower 1-year persistence rates and 2-year persistence rates than traditional students. Furthermore, Texas community colleges need to investigate the reasons behind why International students had lower 1-year persistence rates and 2-year persistence rates than traditional students. By determining the reasons behind the documented differences between International students and traditional students, Texas community college leaders could offer supportive programs and services that could help International students have higher 1-year persistence rates and 2-year persistence rates. If Texas community colleges choose not to investigate the reasons behind why International students had low persistence rates, International students might be at risk of having low persistence rates and might be at risk of not graduating from college.

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