
Differences in First-Generation Student Enrollment by Race/Ethnicity in Texas Community Colleges Over Time

John P. Maynard II, John R. Slate

Department of Educational Leadership, Sam Houston State University, Huntsville, USA

Email address

jpm055@shsu.edu (J. P. Maynard II), jrs051@shsu.edu (J. R. Slate)

Citation

John P. Maynard II, John R. Slate. Differences in First-Generation Student Enrollment by Race/Ethnicity in Texas Community Colleges Over Time. *Language, Literature and Culture*. Vol. 1, No. 2, 2018, pp. 49-54.

Received: June 14, 2018; **Accepted:** June 27, 2018; **Published:** August 2, 2018

Abstract: Examined in this study was the degree to which differences were present in the first-time-in-college student enrollment of Texas Black, Hispanic, and White community college students between the 2009-2010 and the 2014-2015 academic years. Using data from the Texas Higher Education Coordinating Board Interactive Accountability System database for first-time-in-college student enrollment, statistically significant differences were revealed in first-time-in-college student enrollment by ethnicity/race. Between the 2009-2010 and the 2014-2015 academic years, the enrollment percentages of Black and White first-time-in-college students in Texas community colleges decreased, whereas the enrollment percentages of Hispanic first-time-in-college students in Texas community colleges increased. Implications of the findings and suggestions for future research discussed.

Keywords: Enrollment, Community College, 2-Year College, First-Time-in-College, First-Generation, Ethnicity/Race, Texas

1. Introduction

Community colleges represent an important option for students who are seeking postsecondary educational opportunities. Often 2-year institutions represent the preferred choice of students entering higher education due to accommodating admission requirements, ease of access, and lower tuition and fees when compared to 4-year institutions [1, 2, 3]. This preference for community college preference is especially true for Black and Hispanic students. According to the [4], 44% of Black undergraduate students and 56% of Hispanic undergraduate students enrolled at community colleges, compared to 39% of White undergraduate students. In addition to student preference, community colleges provide an array of services. Some of these services include multiple educational opportunities such as technical and vocational education, development of college-readiness skills, and academic courses and experiences that serve as key conduits between high school and 4-year institutions [5, 2]. The influence of community colleges to undergraduate completion at 4-year institutions is notable. Nearly one-half of students who graduated from a 4-year institution in 2013-

2014, had enrolled in a community college [4].

Given the student appeal and numerous services offered, community colleges have experienced a dramatic increase in student enrollment. According to [6], enrollment in community colleges increased by 29% from 2000 to 2010 and is expected to increase by another 21% between 2015 and 2026. In the State of Texas the increase in community college enrollment has been even more substantial. From 2000 to 2015, student enrollment at Texas community colleges increased by 62% and in 2016, nearly 47% of all students enrolled in Texas postsecondary institutions attended a 2-year institution [7].

Given the rapid growth in community college enrollment, understanding the defining characteristics of the students driving this increase in enrollment is important to examine. Compared to 4-year institutions, community colleges tend to enroll a higher number of students who are: (a) Black and Hispanic, (b) academically unprepared, (c) older than the age of 25, (d) first-generation, and (e) dependent on financial aid [8, 9, 10, 11, 12]. Frequently, students are classified into more than one of these student groupings [13, 14], such as a Hispanic student who is both first-generation and academically underprepared.

The substantial increase in student enrollment at Texas community colleges was associated with increased enrollment of Black and Hispanic students. In 2014, Black students comprised 14% of community college students in Texas and Hispanic students comprised 39% of community college students in Texas [15, 4]. In addition, from 2000 to 2015, enrollment of Black students in Texas community colleges increased by 97.1%. During the same period, Hispanic student enrollment in Texas community colleges increased by 135.1% [16]. In comparison, enrollment of White students in Texas community colleges during the same period only increased 5.5%.

Associated with these increases in Black and Hispanic student enrollment was an increase in first-time-in-college student enrollment at community colleges. The [17] defined a first-time student or a first-time-in-college student as “any undergraduate student entering community college for the first-time after graduation from high school or who has never attended any college” (p. 32). According to the [4], 36% of Black first-time students and 43% of Hispanic first-time students enrolled in community colleges. Additionally, 41% of all first-time students were enrolled in community colleges [18]. This enrollment trend for first-time-in-college students might reflect the current situation for first-generation students. Although not all first-time-in-college students are first-generation students, all first-generation students classify as first-time-in-college students. Engle and Tinto [19] estimated that 24% of all students in postsecondary institutions were first-generation students in 2007. Giancola et al. [9] also predicted the percentage of first-generation students would increase. Given that community colleges often have a higher concentration of first-generation students [9, 12], the first-time-in-college numbers constitute an estimate of first-generation students enrolled in Texas community colleges.

The sizable increases in both Black and Hispanic students and first-time-in-college student enrollment reflect the changing dynamics in Texas population. Both Black and Hispanic populations in Texas substantially increased from 2000 to 2010. According to the [20], the Black population increased by 23.91% to nearly 3 million, while the Hispanic population increased by 41.8% to more than 17 million individuals in Texas [21]. The White population increased at a lower rate of 19.61% over the same period. The large growth in Black and Hispanic populations has shifted the balance of the overall population in Texas. In 2015 the [16] estimated that the Black population comprised 12% of the overall Texas population and the Hispanic population represented 43% of the total Texas population, whereas the White population composed 39% of the total Texas population, resulting in a *minority-majority state*.

Given the increases in Black and Hispanic populations in Texas, in Black and Hispanic community college enrollment, and in first-time-in-college enrollment, the State of Texas enacted policies aimed at increasing access to postsecondary opportunities and increasing student success. One major educational initiative in Texas was *Closing the Gaps*. Closing

the Gaps was in place from 2000 to 2015 with four primary goals: (a) increase student participation rates, (b) increase student success through degree or certificate completion, (c) increase the number of recognized programs or services, and (d) increase research funding [22]. Goals to increase student participation rates and to increase student success were related with the changing trends in population and student enrollment.

The Texas Higher Education Coordinating Board provided multiple strategies to assist in the achievement of each of these objectives. Associated with the goal of increasing student participation, the [22] recommended two student-centered strategies: (a) ensure all students and parents understand the benefits of high education and the steps needed to prepare academically and financially for college, and (b) establish an affordable pathway that ensures students are able to participate and succeed. As previously discussed, Black and Hispanic students and first-generation students are more dependent on financial aid and are academically underprepared. Therefore, increasing Black and Hispanic student and first-generation student enrollments was essential to achieve this objective. The second objective of Closing the Gaps, to increase student success, provided a strategy aimed at mirroring the population of Texas: carry out a recruitment and retention plan “aimed at making college and university enrollment and graduation reflect the population of Texas” [22, p. 2]. Through this suggestion, the Texas Higher Education Coordinating Board clearly outlined how Texas planned to rely on increasing Black and Hispanic student enrollment to achieve the Closing the Gaps mission.

Another plan developed by the state of Texas to further support Black and Hispanic students and first-generation students enrolled in community colleges was *TransitionTX*. This program began in 2013 and involved 12 community college campuses located throughout Texas. According to the [23], TransitionTX was “designed to help first-generation, low-income, Hispanic, and African-American first-time-in-college students navigate their first year at participating public, two-year community colleges in Texas” (para. 1). Given that the Texas Higher Education Coordinating Board introduced TransitionTX during the Closing the Gaps timeframe, suggested the state recognized that Black and Hispanic students as well as first-generation students needed more support to be successful. The Texas Higher Education Coordinating Board demonstrated the commitment to these various student groups through this supplemental plan.

1.1. Significance of the Study

Considering the substantial amount of planning, support, and resources that Texas has invested into the recruitment and success of Black and Hispanic students and first-generation students, the benefits associated with this investment need to be explored. The completion of a college degree or certificate provide numerous benefits to the student, such as enhanced job skills, personal development and enrichment, increased job satisfaction, increased career opportunities, and higher income [24, 8, 22]. In particular,

differences in unemployment rates and income earnings between individuals with a college degree and individuals without a college degree are substantial. Educational attainment had a direct influence on unemployment rates and earnings. According to the [25], in 2016 individuals with only a high school diploma had an unemployment rate of 5.2%, whereas individuals with an associate's degree had an unemployment rate of 3.6%. This trend of decreasing unemployment rates with increased educational attainment continued for advanced degrees (e.g., bachelor's, master's), as well. Also, according to the [25], median weekly income when compared to only a high school diploma, was 18% higher among individuals with an associate's degree and 67% higher among individuals with a bachelor's degree. Again, as educational attainment increased, median weekly income also increased.

In addition to the many benefits provided by educational achievement to the student, the State of Texas itself would garner several benefits. Some benefits for the state include higher tax revenues, increases in small businesses and entrepreneurship, reductions in public assistance, and increase in overall economic growth [23, 22]. Therefore, the benefits of educational attainment for Black and Hispanics students and first-generation students, not only benefit the individual but Texas as a whole.

1.2. Purpose of the Study

The first purpose of the study was to determine the extent to which the percentages of Black first-generation students in Texas community colleges changed between the 2009-2010 and the 2014-2015 academic years. A second purpose was to ascertain the degree to which the percentages of Hispanic first-generation students in Texas community colleges changed between the 2009-2010 and the 2014-2015 academic years. A third purpose was to determine the extent to which the percentages of White first-generation students in Texas community colleges changed between the 2009-2010 and the 2014-2015 academic years.

1.3. Research Questions

The following research questions were addressed in this investigation: (a) What is the difference in the percentage of first-generation students who were Black between the 2009-2010 and the 2014-2015 academic years in Texas community colleges?; (b) What is the difference in percentage of first-generation students who were Hispanic between the 2009-2010 and the 2014-2015 academic years in Texas community colleges?; and (c) What is the difference in percentage of first-generation students who were White between the 2009-2010 and the 2014-2015 academic years in Texas community colleges?

2. Method

2.1. Participants

Participants in this study were first-time-in-college

students who enrolled in a Texas community college in the 2009-2010 and the 2014-2015 academic years. The total number of cases downloaded from the Texas Higher Education Coordinating Board for 2009 was 63,542 students from 71 reporting community colleges and for 2014 was 50,693 students from 73 reporting community colleges. For each academic year, the sample of first-time-in-college students was divided into three categories based on student race/ethnicity: (a) Black, (b), Hispanic, and (c) White. Data for other ethnic/racial groups were not examined in this study.

2.2. Research Design

The research design for this quantitative study was nonexperimental as the independent variable was not altered and random assignment was not possible [26]. Because the independent variable (i.e., academic years) was a categorical variable, a casual-comparative research design was used. Johnson and Christensen [26] noted that a casual-comparative research design was appropriate when the purpose of the experiment was to examine the relationship between a categorical independent variable (i.e., academic years) and quantitative dependent variables (i.e., student enrollment by race/ethnicity).

2.3. Instrumentation and Procedures

Data were obtained from the Texas Higher Education Coordinating Board Interactive Accountability System database, and then imported into the Statistical Package for Social Sciences (SPSS) software program. Because the data from the Texas Higher Education Coordinating Board were reported by the community colleges, errors are assumed to be minimal. From the Texas Higher Education Coordinating Board Interactive Accountability System excel data files were downloaded on first-time-in-college student enrollment for the 2009-2010 and the 2014-2015 academic years. For both the 2009-2010 and the 2014-2015 academic years, first-time-in-college student enrollment was divided into three categories based on student race/ethnicity: (a) Black, (b) Hispanic, and (c) White.

2.4. Definition of Terms

For the purposes of this investigation, definitions were selected from the Texas Higher Education Coordinating Board. The Texas Higher Education Coordinating Board is an organization responsible for the assessment of public, higher education institutions in Texas. Data collected by the Texas Higher Education Coordinating Board are self-reported by the various postsecondary institutions of Texas. The following terms are defined by the [17]: (a) *first-generation student*, "a student who is the first member of his or her immediate family to attend a college or university; neither of his or her biological or adoptive parents have ever attended college or university" (p. 32); and (b) *first-time-entering student*, "an entering student who have never attended college. Also includes student who entered with advanced

standing (college credits earned before high school graduation). Students who have not completed their high school work are not included” (p. 32).

3. Results

Prior to conducting inferential statistics to determine whether statistically significant differences were present in first-time-in-college enrollment rates in Texas community colleges of Black students, Hispanic students, and White students between the 2009-2010 and the 2014-2015 academic years, checks were conducted to determine the extent to which these data were normally distributed. Of the standardized skewness coefficients (i.e., the skewness value divided by its standard error) and the standardized kurtosis coefficients (i.e., the kurtosis value divided by its standard error), none of the values for the first research question, three-fourths of the values for the second research questions, and all of the values for the third research question were within the limits of normality, ± 3 [27]. Accordingly, parametric dependent samples *t*-tests were conducted to

answer the three research questions. To be consistent with the data from the other research questions, a decision was made to use the same parametric method for all research questions. Dependent samples *t*-tests are an appropriate inferential statistical procedure to calculate when the variables (i.e., race/ethnicity in the two academic years) are related [28]. In this investigation, race/ethnicity data were present for the same group of students and were at the interval/ratio level of measurement.

For the first research question, the parametric dependent samples *t*-test revealed a statistically significant difference in first-time-in-college Black student enrollment rates in Texas community college between the 2009-2010 and the 2014-2015 academic years, $t(70) = 2.22, p = .03$. This difference represented a small effect size (Cohen’s *d*) of 0.24 [29]. The first-time-in-college Black student enrollment rates in Texas community college in the 2009-2010 academic year were statistically significantly lower, more than 1% lower, than the enrollment rates of first-time-in-college Black students in the 2014-2015 academic years. Descriptive statistics for this analysis are delineated in Table 1.

Table 1. Descriptive Statistics for First-Time-in-College Enrollment Rates of Black Students Over Time.

Academic Year	<i>n</i> of community college	<i>M</i>	<i>SD</i>
2009-2010	71	13.72	11.03
2014-2015	71	12.50	9.36

Regarding the second research question, the parametric dependent samples *t*-test revealed a statistically significant difference in first-time-in-college Hispanic student enrollment rates in Texas community college between the 2009-2010 and the 2014-2015 academic years, $t(70) = 7.81, p < .001$. This difference represented a small effect size (Cohen’s *d*) of 0.31

[29]. The first-time-in-college Hispanic student enrollment rates in Texas community college in the 2009-2010 academic year were statistically significantly higher, almost 7% higher, than the enrollment rates of first-time-in-college Hispanic students in the 2014-2015 academic years. Descriptive statistics for this analysis are present in Table 2.

Table 2. Descriptive Statistics for First-Time-in-College Enrollment Rates of Hispanic Students Over Time.

Academic Year	<i>n</i> of community college	<i>M</i>	<i>SD</i>
2009-2010	71	35.07	21.04
2014-2015	71	41.70	21.91

Concerning the third research question, the parametric dependent samples *t*-test revealed a statistically significant in first-time-in-college White student enrollment rates in Texas community college between the 2009-2010 and the 2014-2015 academic years, $t(70) = 5.62, p < .001$. This difference represented a small effect size (Cohen’s *d*) of 0.31 [29]. The

first-time-in-college White student enrollment rates in Texas community college in the 2009-2010 academic year were statistically significantly lower, nearly 6% lower, than the enrollment rates of first-time-in-college White students in the 2014-2015 academic year. Descriptive statistics for this analysis are outlined in Table 3.

Table 3. Descriptive Statistics for First-Time-in-College Enrollment Rates of White Students Over Time.

Academic Year	<i>n</i> of community college	<i>M</i>	<i>SD</i>
2009-2010	71	41.31	18.91
2014-2015	71	35.47	18.38

4. Discussion

In this study, the degree to which the percentages of first-time-in-college students enrolled at Texas community colleges differed between the 2009-2010 and the 2014-2015 academic years for White, Black, and Hispanic students was determined. Inferential statistics analyses revealed that the

percentages of both Black and White first-time-in-college students in Texas community colleges between the 2009-2010 and the 2014-2015 academic years statistically significantly decreased. In contrast, the enrollment percentages of Hispanic first-time-in-college students in Texas community colleges between the 2009-2010 and 2014-2015 academic years statistically significantly increased.

Given the dramatic increases in Texas population [4] and

in student enrollment of Black, Hispanic, and White students in Texas community colleges [7], first-time-in-college student enrollment for all ethnic/racial groups was expected to increase. Additionally, policies enacted by the state of Texas during this period, such as Closing the Gaps and TransitionTX, were designed in part to increase Black and Hispanic student enrollment, as well as first-generation and first-time-in-college students [23]. These policies further supported the expectation of increases across all races/ethnicities in first-time-in-college enrollment.

In this investigation, however, only Hispanic first-time-in-college student enrollment percentage increased over the 5 years examined in Texas community colleges. The decrease in Black first-time-in-college enrollment percentages and White first-time-in-college enrollment percentages counters the efforts of Texas policies, such as Closing the Gaps, to increase first-time-in-college enrollments. In addition, given that first-generation students are incorporated into first-time-in-college students, first-generation student enrollment for Black and White students in Texas community colleges appears to have decreased, as well. Given these results, the current initiatives and policies by the state of Texas do not appear to be effective for Black and White first-generation student and first-time-in-college student enrollments and should be re-evaluated. The increase in Hispanic first-generation student and first-time-in-college student enrollments might solely be due to the dramatic increase in Hispanic population and should further be investigated. The decreases in Black and White first-time-in-college student enrollment percentages have many implications on the future of Texas community college enrollment trends, as well as on the state's overall economy and growth.

Future research is needed to answer several questions that remain and to expand on this research: (a) What is the difference in the percentage of first-generation students by race/ethnicity between the 2009-2010 and the 2014-2015 academic years in Texas 4-year institutions?; (b) What is the difference in the percentage of first-generation students by race/ethnicity between the 2005-2006 and the 2014-2015 academic years?; (c) What is the relationship between Texas policies and initiatives and Hispanic first-generation student enrollment in community colleges between the 2009-2010 and the 2014-2015 academic years?; and (d) To what extent does the condition of the U.S. economy matter on first-generation student enrollment?

Readers must be cautious not to overgeneralize the findings of this study. First, the study was limited to Black, Hispanic, and White first-time-in-college students who enrolled in Texas community colleges during the 2009-2010 and the 2014-2015 academic years. Second, given that first-generation students are incorporated into the first-time-in-college category, the extent of first-generation student enrollment differences is limited. Lastly, the data analyzed were for only two academic years (i.e., 2009-2010 and 2014-2015) and might not represent the findings for different years.

5. Conclusion

In this investigation, the extent to which the percentages of Black, Hispanic, and White first-generation, Texas community college students had changed from the 2009-2010 through the 2014-2015 academic years was addressed. From the 2009-2010 to the 2014-2015 academic years, the percentage of Black first-time-in-college and White first-time-in-college students enrolled in Texas community college students statistically significantly decreased; whereas the percentage of Hispanic first-time-in-college students enrolled in Texas community college students statistically significantly increased.

Although an increase was documented in the percentage of Hispanic first-time-in-college students enrolled in Texas community colleges, additional efforts are required to increase the percentage of Black students in Texas community colleges. Because first-time-in-college student enrollment data served as an estimate of first-generation student enrollment in Texas community colleges, further work is necessary as well to support first-generation students. Educational leaders at community colleges should continue to provide additional resources and support for first-generation students. Additionally, Texas policymakers and legislators need to examine current strategies and initiatives to determine their effectiveness, and develop policies to address any potential shortfalls.

References

- [1] Atherton, M. (2014). Academic preparedness of first-generation college students: Different perspective. *Journal of College Student Development*, 55 (8), 824-829. doi: 10.1353/csd.2014.00815
- [2] Nuñez, A. M., Sparks, P. J., & Hernández, E. A. (2011). Latino access to community colleges and Hispanic-serving institutions: A national study. *Journal of Hispanic Higher Education*, 10 (1), 18-40. doi: 10.1177/1538192710391801
- [3] Stokes, T., & Somers, P. (2009). Who enrolls in two-year colleges? A national study of price response. *Journal of Student Financial Aid*, 39 (1), 4-18. Retrieved from <https://publications.nasfaa.org/cgi/viewcontent.cgi?article=1031&context=jsfa>
- [4] National Center for Education Statistics. (2014). *Digest of Education Statistics, 2014*. Retrieved from <https://nces.ed.gov/programs/digest>
- [5] Bricker, L. (2008). Closing the gaps in Texas: The critical role of community colleges. *New Directions for Community Colleges*, 2008 (141), 57-65. doi: 10.1002/cc.31
- [6] National Center for Education Statistics. (2015). Total undergraduate fall enrollment in degree-granting postsecondary institutions by attendance status, sex of students, and control and level of institution. Selected years, 1970 through 2015. *Digest of Education Statistics*. Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_303.70.asp

- [7] Texas Association of Community Colleges. (2018). *Community college enrollment*. Retrieved from <http://www.tacc.org/pages/data-and-info/community-college-enrollment>
- [8] Fike, D. S., & Fike, R. (2008). Predictors of first-year student retention in the community college. *Community College Review*, 36 (2), 68-88. doi: 10.1177/0091552108320222
- [9] Giancola, J. K., Munz, D. C., & Trares, S. (2008). First-versus continuing-generation adult students on college perceptions: Are differences actually because of demographic variance? *Adult Education Quarterly*, 59 (3), 214-228. doi: 10.1177/0741713608314088
- [10] Gibbons, M. M., & Borders, L. D. (2010). Prospective first-generation college students: A self-cognitive perspective. *The Career Development Quarterly*, 58 (3), 194-208. doi: 10.100/j.2161-0045.2010.tb00186.x
- [11] Shumaker, R., & Wood, J. L. (2016). Understanding first-generation community college students: An analysis of covariance examining use of, access to, and efficacy regarding institutionally offered services. *Community College Enterprise*, 22 (7), 9-17. Retrieved from <https://eric.ed.gov/?id=EJ1125430>
- [12] Thayer, P. B. (2000). Retention of students from first generation and low income backgrounds. *Opportunity Outlook (May)*, 2-8. Retrieved from <https://files.eric.ed.gov/fulltext/ED446633.pdf>
- [13] Forbus, P. R., Newbold, J. J., & Mehta, S. S. (2011). First-generation university students: Motivation, academic success, and satisfaction with the university experience. *International Journal of Education Research*, 6 (2), 34-48. Retrieved from <https://www.thefreelibrary.com/First-generation+university+students%3A+motivation%2C+academic+success%2C...-a0299759787>
- [14] Harlow, A. J., & Bowman, S. L. (2016). Examining the career decision self-efficacy and career maturity of community college and first-generation students. *Journal of Career Development*, 43 (6), 512-525. doi: 10.1177/0894845316633780
- [15] Ma, J., & Baum, S. (2016). *Trends in community colleges: Enrollment, prices, student debt, and completion*. College Board Research Brief. Retrieved from <http://trends.collegeboard.org/sites/default/files/trends-in-community-colleges-research-brief.pdf>
- [16] Texas Higher Education Coordinating Board. (2017). *Higher Education Accountability System. Participation – Key Measures*. Retrieved from http://www.txhighereddata.org/Interactive/accountability/CC_Participation.cfm
- [17] Texas Higher Education Coordinating Board. (2017). *Glossary of terms*. Retrieved from <http://www.theccb.state.tx.us/reports/PDF/1316.PDF>
- [18] American Association of Community Colleges. (2014). *Where value meets values: The economic impact of community colleges: Analysis of the economic impact and return on investment of education*. Washington, DC: American Association of Community Colleges. Retrieved from http://www.aacc.nche.edu/About/Documents/USA_AGG_MainReport_Final_021114.pdf
- [19] Engle, J., & Tinto, V. (2008). *Moving beyond access: College success for low-income, first-generation students*. Washington, DC: The Pell Institute.
- [20] U.S. Census Bureau. (n.d.). *2010 Census Interactive Population Search*. Retrieved from <https://www.census.gov/2010census/popmap/ipmtxt.php?fl=48>
- [21] Murdock, S. H. (2011). *Population change in Texas: Implications for the labor force, education and economic development*. Symposium conducted for the Texas Workforce Commission, Houston, Texas. Retrieved from <https://hobbycenter.rice.edu/publications>
- [22] Texas Higher Education Coordinating Board. (n.d.). *Closing the Gaps*. Retrieved from <http://www.theccb.state.tx.us/reports/PDF/0379.PDF?CFID=75174569&CFTOKEN=27071848>
- [23] Texas Higher Education Coordinating Board. (2015). *Texas Higher Education Strategic Plan: 2015-2030*. Austin, TX: Author. Retrieved from <http://www.theccb.state.tx.us/reports/PDF/9306.PDF?CFID=74734137&CFTOKEN=56671078>
- [24] College Board. (2018). *Family Income by Selected Characteristics, 2016*. Retrieved from <https://trends.collegeboard.org/college-pricing/figures-tables/family-income-selected-characteristics-2016>
- [25] U.S. Bureau of Labor Statistics. (2017). *Unemployment rates and earnings by educational attainment*. Washington, DC: Author. Retrieved from https://www.bls.gov/emp/ep_table_001.htm
- [26] Johnson, R. B., & Christensen, L. (2017). *Educational research: Quantitative, qualitative, and mixed approaches* (6th ed.). Thousand Oaks, CA: Sage.
- [27] Onwuegbuzie, A. J., & Daniel, L. G. (2002). Uses and misuses of the correlation coefficient. *Research in the Schools*, 9 (1), 73-90.
- [28] Slate, J. R., & Rojas-LeBouef, A. (2011). *Calculating basic statistical procedures in SPSS: A self-help and practical guide to preparing theses, dissertations, and manuscripts*. Ypsilanti, MI: NCPEA Press.
- [29] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.