

Cultural Capital Efficacy in Parental and Student Aligned Expectations for Postsecondary Matriculation

Dr. Kennetra Bryant¹, Dr. Ronnie Davis², Dr. Teryana Lamb³, Mr. Orlando Milton, Jr⁴
Dr. Joyce Montgomery⁵ & Dr. Dominic Thomas⁶

Abstract

The purpose of this study was to investigate the predictability and relationship of selected student-related and institutional factors on the graduation rates of community colleges in multiple regions in the largest state in the Southern Region of the United States. The selected total population for this study included public two-year community colleges within six community college regions in the largest state in the Southern Region of the United States. The target state's Higher Education Accountability System (Community College Success, Participation, Institutional Efficiency and Effectiveness reports were used to collect the data. The data revealed that the student-related and institutional factors of postgraduate employment, receipt of financial assistance, number of full-time faculty, number of part-time faculty and size of institution collectively accounted for 77% of the variance of graduation rates of community colleges.

Key Words: Community College Graduation Rates

1. Introduction

The issue and ongoing debate regarding 21st century community college graduation rates have become a key concern for accreditation agencies as well as federal and state legislators as they frequently utilize graduation rates as a measure for institutional accountability and student success. (Bailey et al, 2007).

Cook & Pullaro (2010) opined that graduation rates serve as a key component of an institution's educational responsibility as it relates to input measures of access and enrollment and output measures of persistence and graduation. Community College graduation rates serve as one of the few easily accessible college level data, based on a longitudinal measure of student achievement. However, there remain key factors that are related to student completion and adversely influence community college graduation rates and the resulting economic impact on a state and national level (Bailey, Crosta & Jenkins, 2007).

Community colleges were created to meet the diverse needs of the community, and the population reflects the community it serves (Strategic Plan for Community Colleges, 2008). According to Ackerman & Schibrowsky (2007) postsecondary education should be available to meet the diverse needs of the community it serves and the authors believe that in order for higher education institutions to be successful college administrators should "treat college students as a business treats their best customers, it becomes important...find out what really matters to students and anticipate their needs"(Ackerman & Schibrowsky, 2007).

¹Instructor, San Jacinto Community College, 4620 Fairmont Parkway, Pasadena, Texas 77504, USA.

²Texas Southern University, 3100 Cleburne St., Houston, Texas 77004, USA.

³Texas Southern University, 3100 Cleburne St., Houston, Texas 77004, USA.

⁴Texas Southern University, 3100 Cleburne St., Houston, Texas 77004, USA.

⁵Grambling State University, 403 Main St., Grambling, Louisiana 71245, USA.

⁶Texas Southern University, 3100 Cleburne St., Houston, Texas 77004, USA.

To that end, a study focusing on the predictability of selected student-related and institutional factors relationship on community college graduation rates is important in the field of higher education to perhaps increase the graduation rate on a state and national level. Educational researchers investigated factors that could possibly have a relationship on community college graduation rates. These factors include financial assistance, postgraduate employment, size of institutional enrollment and faculty employment status number of full-time faculty and number of part-time faculty and if these variables indicate a relationship with graduation rates. According to Perna (1998) previous research indicates that financial assistance received by students had a direct relationship to student attendance and diligence, and in turn led to improved graduation rates in postsecondary institutions.

Earlier research conducted by Porter (2000), Pascarella and Terenzini (2005), and Toutkoushaian and Smart (2001) in regards to the influence of college size and its impact on community college graduation rates has varied conclusions. Toutkoushaian and Smart (2001) investigated the relationship of institutional size to graduation rates and found that the size of institutional enrollment is negatively related to measures of success. Prior research conducted by Jacoby (2006), Harrington and Schibik (2001), and Ehrenberg and Zhang (2004) on the relationship of faculty employment status (full-time and part-time) on community college graduation rates found that student graduation rates within community colleges decreased when the number of part-time faculty employment increased and the likelihood of college freshman graduating, was negative when they took courses from a higher percentage of part-time faculty (Harrington and Schibik, 2001).

Postgraduate employment will continue to play a vital role towards providing an educated workforce to increase America's competitiveness in the world. Attendance and graduation from a two-year institution helps to create a society that is interdependent with human capital as a primary resource. The latest American Association of Community College report (2008) stated that globalization is driving many changes within the economy. With the ambitious goal set for the nation by President Obama, the year 2020 is the goal year for the United States to have the highest proportion of college graduates in the world (Schneider & Yin, 2011).

Currently, however the national average of graduation rates for community colleges are in the low twenty percent, with many colleges graduating far fewer than this average (Schneider & Yin, 2012). It serves a national and state goal for Americans to enroll and contribute to postsecondary graduation rates by completing degree programs, but many students enroll in college and fail to graduate causing college graduation rates to be the "Achilles heel in higher education" (Hunt & Tierney, 2006). Community college students have varied educational goals, which include obtaining a certificate, associate, or bachelor's degree in order to pursue respectable careers and contribute to the economy. Research indicates that community college students encounter challenges, while pursuing their education, ranging from social, economic, academic, institutional and personal issues, which play key factors in graduation rates and yet these issues are outside the control of the institutions (Bailey et al, 2007). Hunt & Tierney (2006) argue that failure to produce college educated graduates on a state and national level negatively contributes to the U.S workforce, and the Nation's past advantages in the global market will decline.

The demands of the 21st century, with its demographic and global economic shifts, requires knowledgeable individuals who continue their educational pursuits and career training beyond high school (Hunt & Tierney, 2006). Research indicates that there are a variety of factors that are related to community college graduation rates. According to previous research by Astin's *Student Involvement Theory and I-E-O Model* (1984), this theorist studied possible demographic, environmental, student-related, and institutional factors that affect overall student college completion, which directly influence postsecondary graduation rates. Factors included in this study addressed the background of students, demographics, college student experiences, goals after student graduation, educational outcomes, career outcomes, and institutional influences. The findings presented in Astin's Student Involvement Theory (1984) reported a "student's chances of dropping out are greater at a community college than a four-year institution. Community colleges were viewed as places where the involvement of both faculty and students appear to be minimal, and the majority of students enrolled attend part-time, also a large proportion of faculties are employed part-time" (Astin, 1984). Research studies dealing with factors that predict community college graduation rates are strictly limited.

1.1 Statement of the Problem

The purpose of this study is to investigate the predictability and relationship of selected student-related and institutional factors on the graduation rates of community colleges in multiple regions in Texas.

Specifically, this study will focus on student-related and institutional factors of postgraduate employment, receipt of financial assistance, faculty employment status (number of full-time faculty and part-time faculty), and size of institution on the graduation rates of community colleges. Consequently, it was hypothesized that selected student-related and institutional factors did have some predictive power on the graduation rates of community colleges.

1.2 Theoretical Framework

The present empirical investigation is based on the theories of Astin's *Student Involvement Theory and I-E-O Model* (1984). This theory concentrates on some aspects of overall college completion within postsecondary educational institutions, which directly relates to higher education graduation rates.

Astin's *Student Involvement Theory* and the *I-E-O Model* focuses on the demographic and environmental factors associated with persistence in higher education. According to the theory, there are major components that serve as key functions to explain the dynamics of student development towards college completion. They are Inputs (which address student background, previous experiences, and demographics), Environment (which addresses a student's experiences encountered during college) and Outcomes (which address characteristics, beliefs, values, and goals that exist after college). This theory stresses that student-related factors, (such as financial assistance, postgraduate employment) and the institutional factors (faculty employment status, size of institution) are significant contributors to enhancing graduation rates at institutions of higher learning, particularly community colleges. Additionally, the theory addresses the accountability of students, college administrators, and faculty for college success because it focuses on the student's involvement and the goals of the college in order to implement and design a curriculum, program, or method for student success. When a postsecondary student interacts continuously with faculty, it is strongly associated with the overall satisfaction of a student's educational experience (Astin, 1984).

2. Methodology

2.1 Type of Design

A quantitative research design was employed in this study. This type of design consists of inquiries grounded in the assumptions that measure the incidence of numerous observable behaviors of a sample and each quantifying data set and generalizing the results from a sample to a population (Gall, Gall & Borg, 2007). Specifically, the quantitative design used in this study was the co relational research design. In order to establish the existence of a co relational research design, researchers must make observations based on measurements of two or more variables (Gall, Gall & Borg, 2007).

There are numerous advantages of a co relational research design, which are: (1) Co relational research allows the investigation of a number of variables believed to be related to major complex variable, (2) it identifies variables that are highly associated for the purpose of determining connection (3) it permits prediction, (4) it provides an estimate of how variables are related, and (5) it identifies variables that can be excluded from future studies.

2.2 Population and Research Setting

The target population for this study includes 74 community colleges, 50 community college districts and six community college regions. The selected total population for this study will include public two-year community colleges within six community college regions in the largest state in the Southern Region of the United States.

2.3 Instrumentation

The target state's Higher Education Coordinating Board's Accountability Interactive System provides relevant and key data file information regarding public universities; health-related institutions, technical colleges, and public two-year community colleges were added to the Accountability system in March 2005. The Accountability system is comprised of four key components that include: out of state peer comparisons, institutional explanation and description, contextual/explanatory measures and key accountability measures, and key accountability measures focus on institutional participation, success, excellence, research and institutional effectiveness and efficiencies. For the purpose of this study, data was obtained utilizing the target state's Higher Education Accountability System (Community College Success, Participation, and Institutional Efficiency and Effectiveness reports.)

This included the following information for the following student-related and institutional factors: the 2010 three-year graduation rate, postgraduate employment a year after graduation, receipt of financial assistance, number of full-time faculty or number of part-time faculty employed, and size of institutional enrollment.

2.4 Data Collection Procedures

The procedure for collecting the data for this research study included visiting the target states Higher Education Coordinating Board website. Once the home page was accessed, the researcher viewed the page entitled "Data resources and tools" and retrieved the "Accountability reports". The Accountability reports were presented in an interactive data file, and the educational researcher analyzed the two-year Public Community Colleges and elected the academic years pertaining to this study. After properly exploring each public two-year institution, data files were accessed that concentrated on the key participation, success, contextual and institutional effectiveness measures. The key participation measures focus on the percent of students receiving Pell grants, and the success measures reviewed the variables of three-year graduation rate, students earning an associate degree, and graduate success which reveals information about students contributing to the economy in postgraduate employment. The key institutional efficiency and effectiveness measures focused on data for the number of faculty employed full-time and number of faculty employed part-time in a selected academic year. After the data was generated by the Higher Education Coordinating Board Interactive Accountability System, the researcher developed a new data file including the variables of postgraduate employment, student in receipt of financial assistance, faculty employment status, and size of institutional enrollment. The researcher recoded all the variables. When variables were coded, the researcher entered them into SPSS.

3. Results

Three null hypotheses were generated and test in this empirical student. Hypothesis one stated that there is no statistically significant relationship between the student-related factors of postgraduate employment, receipt of financial assistance and the graduation rates of community colleges.

Presented in Table 1 were the Standard Multiple Regression results pertaining to the relationship between student-related factors of receipt of financial assistance, postgraduate employment and the graduation rates of community colleges. The regression model yielded a multiple correlation of .69. The variables receipt of financial assistance and postgraduate employment together accounted for 48.2 percent (Adjusted R Square= 46.7%) of the variance in the criterion variable graduation rates.

A linear relationship was found to exist between the predictor's receipt of financial assistance, postgraduate employment and the graduation rates of community colleges

($F(2,71) = 32.978, P < .001$). When the variable postgraduate employment was controlled, receipt of financial assistance was found to contribute significantly to graduation rates

($t(71) = 4.06, P < .001$). In addition, when the variable financial assistance was controlled, postgraduate employment was found to contribute significantly to the graduation rates of community colleges. Therefore, hypothesis 1 was rejected.

Table 1: Standard Regression Results Regarding the Student-Related Factors of Postgraduate Employment, Receipt of Financial Assistance and the Graduation Rates of Community Colleges

Model	B	SE	Beta	t	P
(Constant)	46.197	11.667			
Financial Assistance	.008	.002	.470	4.058	.000***
Postgraduate Employment	.151	.061	.285	2.456	.016*

NOTE: $R = .694$; $R\text{ Square} = .482$; $\text{Adjusted } R.\text{ Square} = .467$; $F = 32.978, df = 2/71, P = .001***$

*Significant at the .05 level

**Significant at the .001 level

Additionally, hypothesis two posited that there is no statistically significant relationship between the institutional factors of number of full-time faculty, number of part-time faculty, size of institution and the graduation rates of community colleges.

A Standard Multiple Regression statistical technique was calculated to determine the relationship between the institutional factors of number of full-time faculty employment status, number of part-time faculty employment status, size of institution and the graduation rates of community colleges. As shown in Table 2, the regression model yielded a multiple correlation of .88. The institutional variables number of full-time faculty, number of part-time faculty and size of institution combined accounted for 77.7 percent (Adjusted R Square= 76.7%) of the variance in graduation rates.

Moreover, a linear relationship was found to exist between the three institutional factors of number of full-time faculty, number of part-time faculty, size of institution and the graduation rates of community colleges ($F(3, 70) = 811.288, P < .001$). When the variables size of institution and number of part-time faculty were controlled, number of full-time faculty was found to contribute significantly to the graduation rates of community colleges ($t(70) = 10.788, P < .001$).

Furthermore, when variables size of institution and number of full-time faculty were controlled, number of part-time faculty was found to contribute significantly to the graduation rates of community colleges ($t(70) = -2.105, P < .05$). Thus, hypothesis 2 was rejected.

Table 2: Standard Regression Results Regarding the Institutional Factors of number of Full-Time Faculty, number of Part-Time Faculty, Size of Institution and the Graduation Rates of Community Colleges

Model	B	SE	Beta	t	P
(Constant)	31.832	7.679			
Full-Time	.549	.051	1.079	10.788	.000***
Size	.000	.000	-.038	-.508	.613
Part-Time	-.047	.022	-.226	-2.105	.039*

NOTE: $R = .881$; $R\text{ Square} = .777$; $\text{Adjusted } R\text{ Square} = .767$; $F = 81.288$; $df = 3/70$; $P = .000***$

*Significant at the .05 level

**Significant at the .001 level

Furthermore, hypothesis three opined that there is no statistically significant relationship between the student-related and institutional factors of postgraduate employment, receipt of financial assistance, number of full-time faculty, number of part-time faculty, size of institution and the graduation rates of community colleges.

Reported in Table 3 were the Standard Multiple Regression results pertaining to the relationship between student-related and institutional factors of receipt of financial assistance, postgraduate employment, number of full-time faculty, number of part-time faculty, size of institution and the graduation rates of community colleges. A multiple correlation coefficient of .89 was found between the five predictors and the criterion variables. The predictor variables receipt of financial assistance, postgraduate employment, number of full-time faculty, number of part-time faculty and size of institution collectively accounted for 78.3 percent (Adjusted R Square= 76.7%) of the variance of graduation rates of community colleges.

A statistically significant linear relationship was found to exist between the five predictors (receipt of financial assistance, postgraduate employment, number of full-time faculty, number of part-time faculty, size of institution) and the graduation rates of community colleges ($F(5, 68) = 49.188, P < .001$). When the variables receipt of financial assistance, postgraduate employment, number of part-time faculty and size of institution were controlled, number of full-time faculty was found to contribute significantly to the graduation rates of community colleges ($t(68) = 9.584, P < .001$). Consequently, hypothesis 3 was rejected.

Table 3: Standard Regression Results Regarding the Student-Related and Institutional Factors of Financial Assistance, Postgraduate Employment, Receipt of Financial Assistance, Number of Full-time Faculty, Number of Part-Time Faculty, Size of Institution and the Graduation Rates of Community Colleges

Model	B	SE	Beta	t	P
(Constant)	30.033	8.042			
Financial Assistance	-.002	.002	-.140	-1.209	.231
Postgraduate Employment	.049	.050	.093	.982	.330
Full-Time	.570	.059	1.119	9.584	.000***
Part-Time	-.037	.025	-.176	-1.455	.150
Size	.000	.000	-.092	-1.067	.290

NOTE: R= .885; R Square= .783; Adjusted R Square= .767; F= 49.188; df= 5/68; P= .000***

***Significant at the .001 level

4. Discussion

One of the most significant findings of the present study was the statistically significant relationship between the number of full-time faculty employed and community college graduation rates. These findings were consistent with those of Jacoby (2006) and Ehrenberg & Zhang (2005). These researchers found that the number of full-time faculty employed was significantly related to community college graduation rates. A plausible explanation for these findings might be that full-time faculty members are able to provide assistance and advise students with academic concerns via email, telephone conferences, or face-to-face appointments designated by the community college campus office hours. Full-time faculty serves as a beneficial component to graduation rates due to experience, discipline specific content knowledge, awareness and experience with the institution's culture and availability through office/conference hours.

Perhaps the most surprising finding of this study was that the number of part-time faculty employed had a significant negative relationship with community college graduation rates. This finding was also consistent with those of Jacoby (2006) and Ehrenberg & Zhang (2005). These researchers found that the number part-time/adjunct faculty employed hindered the academic performance of students and had a negative effect on graduation rates. An explanation for the current findings might be that although part-time faculty/adjunct faculty have access to the many resources full-time faculty have, which include mailboxes, email accounts to converse with students, colleagues, and faculty part-time faculty might lack the knowledge of the institution's culture. Another explanation for this current finding might be that part-time faculty might teach at more than one community college, university or have full-time employment somewhere else, which limits faculty-student interactions due to other responsibilities and engagements. Trainings, workshops, seminars, and informational sessions could possibly strengthen the environment for part-time faculty and better equip educators to effectively facilitate and prepare instruction which will possibly support positive learning environments and in turn possibly positively impact community college graduation rates.

Moreover, size of institutional enrollment was found to have a linear relationship with community college graduation rates. These findings were consistent with Porter (2000). Porter (2000) examined the strength of the U.S. graduation rate performance indicators, which evaluated a postsecondary institution's actual versus predicted graduation rate. The research utilized a linear regression equation to address the variables measured. The results of the study indicated that student body size might affect graduation rates; however, the direction and association is not well defined. Porter (2000) explains that one of three measuring constraints related to graduation rates in higher education institutions is the total enrollment of an institution. Porter (2000) states that when measuring a higher education institution's graduation rate, it should be done with caution, because there is no nationally agreed upon methodology for measuring graduation rates among institutions, and there are no national standards for gathering data upon the measures of accountability (Porter, 2000).

Perhaps an explanation for this current finding might be that larger, postsecondary institutions such as universities enroll more students than a community college. Universities have more amenities such as costly infrastructures including numerous computer labs, recreation facilities, student advisement offices, dining halls, hotels, parking garages, stadiums, campus housing, etc., which attract more students and faculty.

The larger the postsecondary institution, the more likely it is that the institution will be able to accommodate the population that it serves. When higher education institutions have larger enrollment there will likely be a resulting increase in a class size. This may negatively affect student-faculty interactions with less one on one face time. Community colleges have campus amenities but not equivalent to those of a university. Many community college class sizes are generally smaller in comparison to a university. Within higher education institutions it appears that smaller class size and more student-faculty interactions, increases graduation rates, but larger enrollments could work in the opposite direction due to larger class sizes and therefore fewer faculty–student interactions (Porter, 2000).

Another notable finding of the present study was the statistically significant linear relationship of students receiving of financial assistance and community college graduation rates. These findings were consistent with the research of Perna (1998) and Crockett, Heffron & Schneider (2012). These researchers found that there was an association with students in receipt of financial assistance and the completion of two-year community college associate degrees. An explanation for this current finding might be that when students receive financial assistance, there is an increased possibility that students are able to persevere in college since a form of financial aid is offered to help with the cost. Another explanation for this recent finding might be that when students receive financial assistance the need to work full-time jobs that conflict with course offerings each semester diminishes, and there is an increased chance that students will have an opportunity to take additional courses within their degree plan to work towards graduation. Also, when students receive financial assistance this will aid in the acquiring essential resources and supplies needed for community college success.

Lastly, postgraduate employment was found to contribute independently to the relationship of community college graduation rates in the present study. According to the state's Higher Education Coordinating Board (HECB) Strategic Plan Report (2008) the educational attainment of a college degree is strongly connected to and impacts the earning potential over an individual's working lifetime. The absence of a certificate or college degree is connected to a low income and lack of socioeconomic progress. The same report explains that community colleges continue to be the primary providers of current workforce training, education, and retraining in courses, adult vocational education, certificates, and degree programs that prepare community college graduates for postgraduate employment. An analysis by the state Workforce Commission, state HECB, and the state comptroller of public accounts explain that increasing graduation rates by the number of postsecondary degrees and certificates awarded has a significant progressive economic effect on society and the degree recipient (Combs, 2013).

An explanation for this current finding might be that when community college students graduate and obtain employment upon graduation, this contributes to the graduation rate. Students who matriculate into postgraduate employment a year after graduation contribute to the economic impact on a state and national level, additionally postgraduate students employed are able to provide resources to the higher education institution through alumni giving, which in turn can help current students. When postsecondary students graduate with a degree, employment opportunities become accessible where a college degree serves as the requirement for postgraduate employment within certain occupations. When there are a number of individuals seeking employment based on their college degree this contributes to higher graduation rates. Another explanation for the current finding might also be that when community college graduation rates increase a trained, knowledgeable workforce, employment opportunities that require individuals with an associate degree or higher are directly related to postgraduate employment. Postgraduate employment adds to the increased economic growth through an educated workforce and this connects to higher graduation rates.

4.1 Implications

The findings of the present study could be useful for community college administrators, faculty (full-time and part-time), students, and school districts participating in dual credit courses. This study, when generalized to the concerns of community college faculty, may have implications for most community college full-time and part-time faculty. The concern lies with how faculty's employment status and teaching practices affects students obtaining a degree from an accredited community college and contributing to the overall graduation rate. Community college administrators should establish on-going professional development training courses and workshops for full-time and part-time faculty to enhance overall teaching and professional practices in order to meet the academic needs of students and the institution.

In addition, it would benefit community college instructors to have resources including mailboxes, email accounts to converse with students, colleagues, and faculty: to receive campus related updates and information, office space, access to campus telephones, printers, computers, meeting areas or rooms for students and faculty, internet, faculty workshops, meetings, faculty support, and trainings.

Community college administrators and faculty may use the findings from this study to more fully understand the institutional factors that possibly predict a relationship on community college graduation rates. Furthermore, these findings can be used to guide and establish structures that will increase in the opportunities provided for part-time community college faculty to collaborate with full-time community college faculty on improving curriculum and instructional quality in the fields they teach which in turn might enhance working conditions and meet the academic needs of the students they serve (Jenkins, 2011).

This study, when generalized to the concerns of students attending a community college and receiving financial assistance, may have implications regarding retention and possibly graduation. When students receive financial assistance, they are able to persist in their educational goals by acquiring necessary resources to ensure academic success. Community college administrators and school district superintendents should launch programs that educate students on the variety of financial aid resources available in community colleges, dual credit courses, and public and private high schools. Furthermore, this would benefit community colleges seeking to find ways to increase student retention and students wanting to continue their degree graduate and find employment after graduation, which would contribute to the economic impact on a state and national level.

This study, when generalized to the concerns of the possible economic impact on a state and national level, may have implications regarding the relationship between community college graduates achieving employment in careers that require a postsecondary degree. Community college administrators, businesses, stakeholders, and school districts should establish and promote programs that educate and inform community college administrators, postsecondary students, secondary students, faculty, businesses, and stakeholders about the advantages of obtaining a college degree when seeking postgraduate employment in a career that requires a degree. The development and implementation of the program might possibly attempt to align community colleges, stakeholders, and local business in advancing the community they serve, while emphasizing the advantages of a college degree for a career requiring a college degree. This might possibly increase postsecondary graduation rates and individuals qualified for postgraduate employment.

4.2 Recommendations

Knowledge regarding the predictability of student-related factors and institutional factors plays an important role in the relationship to community college graduation rates. Future research about the student-related and institutional factors of postgraduate employment, receipt of financial assistance, number of faculty based on employment status and size of institutional enrollment's influence on community college graduation rates should be considered when designing curriculum and instruction plans to promote community college student success.

In essence, future research should be conducted to investigate the effectiveness of training workshops and professional development for part-time faculty to see if these professional resources are related to community college graduation rates. Designing an efficient professional development curriculum geared toward student-centered teaching techniques with the inclusion of 21st century technology up to date resources for full-time and part-time faculty is essential to potentially increase community college graduation rates.

Also, future research should be conducted to discover the comparisons of size of institutional enrollment and class size relationship to community college graduation rates. Next, a study should be done to research the direct relationship community college graduation rates have with students who receive financial assistance yearly. Finally, a study should be done to further explore postgraduate employment influence on community college graduation rates.

References

- Ackerman, R., & Schibrowsky, J. (2007). A Business Marketing Strategy applied to Student Retention: A higher education initiative. *J. College student retention, vol. 9(3)* 307-336, 2007-2008. University of Nevada, Las Vegas.
- Astin, A. (1984) Student Involvement: A developmental theory for higher education. Graduate School of Education, University of California, Los Angeles. 518-520. Bailey, T., Crosta, P. & Jenkins, D. (2007) The value of Student Right-to Know Data in assessing community college performance, Community College Research Center. *CCRC Brief, journal 34*.
- Campbell, D. T., & Stanley, J. C. (1963). *Experimental and quasi-experimental design for research*. Hopewell, NJ: Houghton Mifflin Company.
- Cook, B., Pullaro, N., (2010). *College Graduation Rates: Behind the Numbers*. The American Council on Education Center for Public Analysis.
- Combs, S. (2013). Chapter 4: The Economic Impact of Community Colleges. Comptroller of Public Accounts.
- Crockett, K., Heffron, M., Schneider, M. (2012) *Can Financial Aid Improve Student Success at Louisiana's Community Colleges? A Study of the Potential Impact of Redistributing State Gift Aid on the Success of Pell Grant Recipients*. American Institutes for Research (AIR) Noel-Levitz.
- Ehrenberg, R. G. and Zhang, L. (2004). Do tenured and tenure-track faculty matter? (CHERI Working Paper #53).
- Gall, M., Gall, J., Borg, W., (2007). *Educational Research An Introduction*. (8th Ed.) Pearson.
- Gravetter, F., Wallnau, L. (2009). *Statistics for the Behavioral Sciences*. (8thed). Wadsworth Cengage Learning.
- Harrington, C., & Schibik, T. (2001). Caveat emptor: Is there a relationship between part-time faculty utilization and student learning retention? Association for Institutional Research Files On-line, 91.
- Jacoby, D. (2006). —Effects of Part-Time Faculty Employment on Community College Graduation Rates, *Journal of Higher Education, 77*, 1081-1103.
- Pascarella, E., & Terenzini, P., (2005). *How college affects students: A third decade of research (Vol. 2)*. San Francisco: Jossey - Bass.
- Perna, L. W. (1998). The contribution of financial aid to undergraduate persistence. *Journal of Student Financial Aid, 28(3)*, 15-40.
- Porter, S. (2000). *The Robustness of Graduation Rate Performance Indicator Used in the U.S. News and World Report College Rankings*. University of Maryland Press.
- Schneider, M., Yin, L., (2012) *Completion matters: the high cost of low community college rates: American Enterprise Institute*.
- Toutkoushian, R., & Smart, J. (2001). Do institutional characteristics affect student gains from college? *Review of Higher Education, 25(1)*, 39-61.