

## From the Field: Practical Applications of Research

# Retention of Long Island Millennials at a Suburban Community College: Are They College Ready?

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### Abstract

This study contrasts the socio-economic characteristics of students enrolled at a suburban community college who graduated or transferred to a college or university with the characteristics of those students who did not persist to graduate or transfer to a four year college program. Identified characteristics that could serve as reliable predictors of non-persistence, defined by either non-graduating or non-transferring to a four-year institution, were student median household income; household income levels of student's home community; eligibility for Tuition Assistance Program (TAP); eligibility for Pell Grants; enrolled in remedial or Basic Education classes; and census data by zip code of education attainment.

Revealed were differences between those who graduated or transferred out to four year colleges and non-persisters who were enrolled in remedial education and who came from zip codes of communities with higher household poverty levels. These students typically attend community college on a less than full time basis which makes them ineligible for either Pell Grants or TAP. Among these non-persisters are 18-year old, first time in college, Black and Hispanic males who represent significantly higher enrollment in remedial education. Additionally, GED recipients who were non-persisters were four times greater than GED recipients who graduated or transferred out.

Strong associations existed between a lack of persistence among students who did not graduate or transfer and those who were Pell Grants recipients and tested into remedial and Basic Education Programs. Stronger associations existed between non-persistence in graduating or transferring out Pell Grants recipients and communities with higher levels of household poverty income.

A stepwise multiple regression indicated that remedial level and enrollment in Basic Education Program were predictors of non-persistence.

### Introduction

Long Island's young people are leaving the region, taking with them skills that the Long Island workforce needs to sustain the regional economy. The academic achievement of students at Long Island's community colleges is critical to Long Island's future because the community colleges provide a pathway for Long Island's future workforce between high school and senior colleges. However, are enrollees in community colleges academically prepared for the rigors of higher education?

According to ACT, the leading U.S. college admissions test which measures what was learned in high school in order to determine academic readiness for college, over 60 percent of the 1.7 million high school graduates in 2012 were not adequately prepared for college or to succeed in the workforce. In 2012, 25 percent of graduates failed to meet college readiness standards established by ACT for English, mathematics, science and reading, and 60 percent fell short of the benchmarks in two of the four subjects (Sheehy, 2012).

ACT found that of the 2012 high school graduates, only 23 percent of African American, Hispanic, and American Indian students achieved the benchmark set for mathematics, less than 15 percent were deemed ready for college-level science courses, and more than 50 percent did not achieve any of the established standards for the four core subjects (Sheehy, 2012).

Although there has been success in students' admission to college, the lack of readiness for college is apparent by the approximately 60 percent of freshman college students who annually discover that they are not ready for a post-secondary education, and that before they can begin taking college level courses leading to an academic degree, they must first take non-college degree earning remedial courses in English or mathematics (National Center, 2010).

Furthermore, a Stanford University study revealed that these students believed that community colleges had low academic standards, that their high school education was enough to succeed, that anybody over 18 years of age could attend, and that community college was a second chance for low performing students. Upon entering community college these students found that they were not academically ready and had to take noncredit remedial courses that extended their time for a degree and increased their total college costs (Kirst, 2006).

The fact that some students lack readiness for the rigor of college studies and must take remedial classes is reflected in lower retention rates and is illustrated by the majority of students who begin remedial courses but fail to complete their college degrees. This readiness gap is less prevalent in selective four-year colleges and universities while more prevalent in two-year colleges, because highly selective four-year educational institutions tend to be more discerning in their admissions criteria which screens out non-college ready students. The gap between students who enroll and students who fail to graduate is more prevalent in open-access two-year colleges and somewhat selective four-year colleges where between 80 and 90 percent of undergraduates enroll. In two-year colleges, where enrollment is customarily based on achieving a high school or equivalency diploma approximately 25 percent of freshman students are fully prepared for college-level courses with the other 75 percent requiring remedial support in English, mathematics or both (National Center, 2010).

Retention rates are also impacted by persistence. Early dropouts, described as "students enrolled for one term of study but never returning to the same college for another term" were five percent more likely to require remedial education in reading, writing, and mathematics and more likely placed at two or more levels below college-level than students who enrolled twice in the first four terms of study. While students in remedial education courses had the highest rate of failure, the rate of failure, course withdrawal, and incomplete grades of early dropouts were between 30 and 40 percent higher than those who enrolled twice in the first four terms of study (Crosta, 2013).

Despite retention challenges, community colleges provide an alternative to the rising costs of higher education while providing a path to a four-year college, especially for students needing remedial classes who often come from lower income and poverty households.

The U.S. Department of Education found that 41 percent of low-income students who enrolled in a four-year college or university graduated within five years, as compared to 66 percent of higher income students. Illustrating the impact that household income has on academic achievement of low-income students attending higher education was that 47 percent of low-income students who did not return to college left in good academic standing. Few of these students, defined as those over 25 years of age finish their education, as illustrated by the 12 percent of the

undergraduate student population who are returning students (StateUniversity.com, 2016). Furthermore, only 38 percent of students who drop-out return to higher education as compared to the 65 percent of drop-outs who planned to return (Community College Completion, 2016).

Lower household income was impactful to 54 percent of students who had to work and could not balance community college academic rigors while contributing financially to family budgets, while 31 percent said they couldn't afford college. Another 23 percent had dependent children and 62 percent of those who dropped out had to pay for their own education. As for community college students who needed to work, 60 percent worked 20 hours per week and 25 percent worked 35 hours or more per week. The fact that 85 percent of community college students with work responsibilities had to enroll part time limited their available financial aid options (Community College Completion, 2016). Additionally, 66 percent of college students had to stop their schooling so they could support their family (Weissmann, 2012).

The challenge of paying for a community college education is further complicated by the State and Federal financial aid regulations facing many first-time and part time students, making it more difficult for part time students to obtain financial aid at a time when they may need to work to pay for college or contribute to the financial needs of their families (Kirst, 2006).

While individual and family financial pressures impact community college students so does the reality of academic responsibilities and challenges. A 2011 Harvard University study found that nearly half of American college students left college before receiving a degree. The reasons cited were: money concerns such as increased debt and underestimating costs; poor preparation for understanding the academic workload, social habits and daily routines; outside demands including family and professional responsibilities, too much freedom, lack of structure, and being lost in the crowd of students. Also, the individual academic relationships experienced during high school with teachers meeting students three to five days per week do not exist in college. Students have to initiate academic connections with their professors (Purnell, 2013).

The financial pressures lead high school graduates to enroll in college with expectations that a college degree will allow them access to a good paying job and a middle-class lifestyle. However, just 56 percent of students who begin a bachelor's degree program graduate in six years and 29 percent who seek an associate degree from a community college obtain that degree within three years. The reality is that in the current economy it is more challenging to earn a middle-class wage without a college degree while 41 percent of the current American workforce have just a high school diploma (Weissmann, 2012).

Many post-secondary educational institutions lack established plans or goals to improve retention and degree

completion, and many of these educational institutions blame the lack of retention on students rather than on themselves. While academic readiness is a critical factor in college retention, academic support for struggling students may not be enough to keep them in school. Students who dropped out have indicated their need to feel connected to the campus community, saying they were isolated from campus life or did not fit in (StateUniversity.com, 2016).

A region's true asset is its people, its human capital, and begins with educated young people from a diverse and demographically changing population. Drop-out rates have been found to be higher in African American, Hispanic and younger students, and to a lesser degree, students who were the first college enrollees from their families, students with limited English proficiency, and others such as returning adult students. Nearly 40 percent of students are estimated to leave an institution of higher education without getting a degree with 75 percent of those students leaving within the first two years of college. Freshman year students have the most difficulty having an attrition rate of between a 20 to 30 percent (StateUniversity.com, 2016).

In terms of the attrition rate of community colleges students between 1996 and 2006, the United States was surpassed by six nations in higher education degrees for students between the ages 25-34. In Texas, for example, students between the ages of 25-34 with a two year or four-year degree lagged behind students between the ages of 35-64 with similar degrees. The importance of this is illustrated by 45 percent of all first-time students enrolling in community colleges accounting for 50 percent of total enrollment in public post high school education (Kirst, 2006).

As for retention rates of GED students, a comparison of 40 GED and 40 high school graduates enrolled at Lorain County Community College in Ohio provided differences in demographic and academic achievement. The GED students had 63 percent more males, 20 percent fewer Caucasians and almost three times more married students. The high school graduates exceeded GED students' GPA by 2.66 to 1.95, attempted credit hour average 33.3 to 12.4, and completed credit hours 31.4 to 10.8. The mean placement scores of high school graduates in English, reading and mathematics were significantly higher than those of GED students. While some high school graduates would require remedial help in mathematics, the GED student required remedial assistance in English, reading and mathematics (Schillo, 1990).

### **Purpose of Study**

The purpose of this study is to identify the socioeconomic characteristics of students enrolled at a suburban community college who complete the two-year curriculum in two or three years and graduate or transfer to a college or university with the characteristics of those students who do not. To improve academic assistance programs the needs of community college students before they begin to

pursue their Associate Degree have to be clarified. Toward that goal, this study examines the relationships between two groups of students who persist or do not persist in their educational goals and their remedial class enrollments; Basic Education Program (BEP) enrollment; census data of education attainment, median income and poverty levels of student home communities; and recipients of Tuition Assistance Program (TAP) and Pell Grants.

### **Methodology**

#### **Participants and Procedures**

The cohort selected for the sample are first time, full time students seeking an Associate Degree who entered a suburban community college in the Fall of 2011 and were scheduled to graduate in June of 2013. The status of each student entering a suburban community college in the Fall of 2011 was determined as of the Fall of 2014 and identified as either graduated or not graduated. Included in the sample were those students who began in the Fall of 2011 and graduated by end of Fall 2014.

The cohort is divided into two groups. The first are those who completed the curriculum during or before the Fall of 2014, the second are those who did not complete the curriculum during or before the Fall of 2014. One-hundred students, randomly selected, are included in each group. Students completing the curriculum include those who graduated from a suburban community college with an Associate Degree or transferred out to a senior college. Students not completing the curriculum include those who returned after the Fall 2014 and did not graduate and those who began in the Fall of 2011 and did not graduate or transfer out.

The sample was randomly selected from a list of 4,282 Fall 2011 first-time, full time, Associate Degree seeking students, comprised of 1,083 who graduated, 876 who transferred out, 756 who returned and did not graduate, and 1,567 not completed nor transferred out.

Based on random numbers assigned to student ID numbers, the random assorted numbers were ranked from low to high with the selected sample equally divided into two groups of 100 students, completed and not completed. Completed included graduated or transferred out, and incomplete included not graduated or not transferred out. Student names and addresses were not included assuring confidentiality and anonymity of those included in the sample.

The independent variables for the sample were obtained from the suburban Community College Office of Strategic Planning and Institutional Effectiveness in cooperation with the suburban Community College Institutional Review Board, and included home zip code, gender, ethnicity/race, age, previous education level, whether the student transferred in, received financial aid, was enrolled

in a Basic Education Program or remediation program and level of remediation, and Grade Point Average, degree program selected when enrolled, and Associate Degree earned.

## Data Analysis and Discussion

### Research Question One

For students completing the curriculum at a suburban community college required for graduation, not completing the curriculum, returning to college and not graduating and not graduating or transferring out, what were their gender, race and ethnicity, remedial class enrollment rate, Basic Education Program (BEP) enrollment rate, census data of level of education attainment, median household income and poverty levels of student home communities, and Tuition Assistance Program (TAP) and Pell Grants recipients? Descriptive statistics and frequencies of each variable was used to determine if any distinctive patterns existed between students who complete, non-complete, and those who did not graduate or transfer out.

Thirty-two percent of those returning to complete their studies did not complete the curriculum over a three-year period and 68 percent did not graduate or transfer out. Eighty percent of those not completing the curriculum at a suburban community college took remedial courses as compared to the 62 percent of students completing the curriculum. Of the students not completing the curriculum, the 47 percent taking level two and three remedial courses exceeded by 59 percent the 28 percent of those who completed the curriculum taking level two and three remedial courses.

Of those enrolled in the Basic Education Program (BEP), the 15 percent who did not complete the curriculum was more than twice the six percent of those who completed the curriculum. Those having a GED who did not complete the curriculum were four times greater than those having a GED who completed the curriculum.

There were gender, age, racial and cultural differences between those who completed the curriculum and those who did not. Those not completing the curriculum were 57 percent male, 70 percent 18 years of age, 48 percent white, 20 percent Black, 23 percent Hispanic, and one percent Asian.

Household income was lower in households of those who did not complete, and non-graduates or transfers out. Those who completed came from zip codes with household income between \$48,438 and \$150,161 and a median household income of \$96,563, as compared to those who did not complete who came from zip codes with lower household income between \$35,748 and \$139,565 and a lower median household income of \$91,718. Those non-graduates or non-transfers out came from zip codes with household income between \$35,748 and \$139,565 and a lower median household income between \$90,896 and \$91,718.

Median Household Income was lower in non-complete, non-graduate or transfer out. The 40.8 percent of students who did not complete had median household income below \$90,000 which was 23 percent greater than the 33 percent of those who completed. By comparison, the 67 percent of the students who completed had median household income over \$90,000.

The level of poverty was also a factor. There was a greater distribution of those who did not complete within households in zip codes with higher levels of poverty as compared to households of those who completed. The 22.5 percent of those who did not complete in zip codes with poverty levels between 10.1 to more than 20 percent was 50 percent greater than the 15 percent of those in the same poverty levels who completed.

The level of financial assistance provides insight into a student's individual and family financial needs. The 39 percent of recipients of Pell Grants who completed were three percent less than the 42 percent who received Pell Grants and who did not complete. Conversely, the 61 percent not receiving Pell Grants who completed was 3 percent greater than the 58 percent receiving Pell Grants who did not complete.

Recipients of Tuition Assistance Program (TAP) were 38.2 percent of those who did not graduate and did not transfer out.

### Research Question Two

How did the students that completed the curriculum at a suburban community college required for graduation, differ from those that did not complete the curriculum, and from those students that did not graduate or transfer out, in remedial class enrollment, Basic Education Program (BEP) enrollment, census data of education attainment, median household income and poverty levels of student home communities, and Tuition Assistance Program (TAP) and Pell Grants?

Descriptive statistics were used to report means, standard deviations and frequencies of each component for each variable. A t-test of independent mean differences and item analysis for each variable was conducted to determine if any distinctive patterns existed between students who complete, non-complete, and those who did not graduate or transfer out.

The greatest percentage differences between the means of those completing, non-completing and non-graduate or transfer out existed in levels of remedial education, the poverty level of the household and Zip code where each student lived and in the Pell Grants and TAP received.

As compared to those who complete, those who did not complete or did not graduate or transfer out tended to be among 52 percent of the population that required

higher levels of remedial education, were 13 and ten percent greater than the contrast group to come from Zip codes and households with higher levels of poverty, and were respectively eight and five percent more likely to receive Pell Grants and TAP.

Smaller percentage differences were found to exist between students who complete, non-complete or graduate or transfer out and BEP enrolled, the median income of the Zip code and household each student came from, and the respective academic achievement level of that Zip code.

#### Research Question Three

What were the relationships among students that completed the curriculum at a suburban community college required for graduation, those that did not complete the curriculum, and those that did not graduate or transfer out, among remedial class enrollment, Basic Education Program (BEP) enrollment, census data of education attainment, median income and poverty levels of student home communities, and Tuition Assistance Program (TAP) and Pell Grants? Two Pearson Product Moment Correlation analyses were used to identify the significant relationships in the total student sample and the relationships in the non-graduate or transfer out.

Relationships in the total student sample reflected that six percent of the variance in those who completed the curriculum is associated with remedial level and two percent of the variance is associated with BEP enrollment. Six percent of the variance in those not completing were associated with remedial education and two percent of the variance associated with BEP enrollment. Four percent of the variance in those who do not graduate or transfer out was associated with remedial level and two percent associated with BEP enrolled. A very strong relationship existed between remedial level and BEP enrolled accounting for 33 percent of the variance.

Other relationships existed between Pell Grants and remedial level with 3 percent of the variance; sample median household income with 11 percent of the variance; zip code median household income with 12 percent of the variance, zip code poverty percent with 9 percent of the variance, and household poverty income with 11 percent of the variance; BEP with 3 percent of variance and zip code with two percent of the variance.

Weaker relationships existed between TAP and remedial level, zip code poverty percent, poverty household income, zip code median household income, median household income of the sample and strongly correlated with Pell Grants with 27 percent of the variance.

The relationships among non-graduate or transfer out and Pell Grants recipients reflected that 10 percent

of the variance in Pell Grants is associated with remedial level, 18 percent of the variance associated with zip code median household income, 17 percent of the variance associated with the median household income of the sample, 15 percent of the variance associated with zip code poverty percent, and 20 percent of the variance associated with poverty household income. Other relationships include 21 percent of the variance in TAP is associated with Pell Grants and 30 percent of the variance in remedial level is associated with BEP enrollment.

#### Research Question Four

How did remedial class enrollment, Basic Education Program (BEP) enrollment, census data of education attainment, household median income and poverty levels of student home communities, Tuition Assistance Program (TAP) and Pell Grants predict the rate of students completing, not completing and not graduating or transferring out? Stepwise multiple regression models calculated the extent to which remedial class enrollment, Basic Education Program (BEP) enrollment, census data of education attainment, median household income and poverty levels of student home communities, Tuition Assistance Program (TAP) and Pell Grants predict the rate of students who did not graduate or transfer out.

Remedial level predicted four percent of the variance in those who did not graduate or transfer out, that BEP enrolled predicted 34.1 percent of the variance in the remedial level of non-graduate or transfer out followed by Tap with 1.8 percent of the variance and race/ethnicity with 1.4 percent of the variance, and the BEP enrolled non-graduate or transfer out indicated that Pell Grants predicted 3.4 percent of the variance.

#### Conclusion

This study examined the socio-economic characteristics of students enrolled at a suburban community college who graduated or transferred out to a college or university with the characteristics of those students who didn't.

Those who did not graduate or transfer out typically were enrolled in remedial education, came from zip codes and communities with higher household poverty levels, attended a suburban community college on a less than full time basis which, in many instances, made them ineligible for either Pell Grants or TAP. Among these non-completers were 18-year old, first time in college, Black and Hispanic males who represented significantly higher enrollment in remedial education. Additionally, while GED recipients were a small part of the selected sample, differences in their persistence warrants further examination. For example, GED recipients were four times more likely not to persist and not complete the curriculum when contrasted with GED recipients who persist and graduate or transfer out.

Strong associations existed between the lack of persistence in students who did not graduate or transfer out and those who tested into BEP, were placed in some level of remediation, were recipients of Pell Grants, and came from communities that typically reflect a higher level of household poverty income. Also revealed were that Pell Grants and Tap recipients came from both poverty and lower median household income communities and were more likely not to persist.

## Recommendations

The study identified seven characteristics that could serve as reliable predictors of non-persistence, defined by either non-graduating or non-transferring to a four-year institution. They are student median household income, household income levels of student's home community, eligibility for Tuition Assistance Program (TAP), eligibility for Pell Grants, enrollment in one or two remedial classes, enrolled in three remedial classes (Basic Education Program), and Census data by zip codes of education attainment.

These characteristics can help identify possible non-persisters when they enroll at a suburban community college and special assistance can be provided to them so that they can be given the best chance to succeed academically. The suburban community college student orientation program should be expanded to include workshops focusing on financial management of college student loans, student time management, and college success for GED students and 18-year-old Black and Hispanic males from high poverty and low median household income communities.

Additionally, mentors or completion coaches should be assigned to students who test into remediation and BEP, and first semester Freshman Experience course should be required for all identified at risk students focusing on motivation and affirmation of student persistence.

Integral to assisting potential non-persisters is for a suburban community college to create tighter linkages with the top feeder high schools that have non-persisters and expand early identification and intervention efforts in the feeder middle schools beginning with the 7th grade. Intervention efforts for at risk students should be in collaboration with existing middle and high school early intervention programs.

This study should be repeated after a period of time to evaluate the impact that any early identification and intervention programs at the middle schools and high schools had on persistence levels of enrollees at a suburban community college.

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