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**First-Generation Community College Students:  
The Impact of College Experiences and Outcomes on Educational  
Attainment**

By  
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**ABSTRACT**

The competitiveness of the United States depends largely on the ability of its students to attend a postsecondary institution and prepare for the workforce demands of the 21st century. The nation also benefits when it provides its academically prepared students with an opportunity to persist in attaining their educational goals. The positive impact that educational attainment has on the economic productivity of our entire citizenry has been evidenced by the correlates of obtaining a post-secondary education with decreased unemployment and public assistance and increased volunteerism, voting, and personal income. With our nation's competitiveness in the world economy at issue during the past decade, our ability to compete in the global economy is of particular concern.

With a steady increase in the percentage of students attending post-secondary institutions in recognition of the importance of a college education, we have seen a tremendous growth among community colleges, which have increasingly served the number of students from low to moderate income families. The National Center for Education Statistics Beginning Postsecondary Longitudinal Study revealed that 53% of students beginning their post-secondary education at two-year colleges were first-generation college students from families where neither parent had more than a high school education (Choy, 2001). Studies have also revealed that academically prepared first-generation

college students are more likely to suffer from miscellaneous barriers and leave college at the end of the first year (Advisory Committee on Student Financial Assistance, 2006).

This study examined the college experiences and development of a cohort of first-generation community college students from the Beginning Postsecondary Students 1996-2001 longitudinal dataset. Three stages of research were conducted to address the major purpose of the study: (1) providing a profile of first-generation community college students; (2) examining of the differences between first-generation and other community college students in both academic and non-academic experience of college; and (3) determining the differences between first-generation and other community college students on psychosocial development variables. The three stages allowed us to examine the extent that college experience differences translate to college outcome differences of first-generation and other college students. The results of this study revealed first-generation students were generally more satisfied with their college experience, more satisfied with the job (in 2001), and expressed factors that can assist educators and administrators in understanding the experiences of first-generation community college students and develop a course of action to assist these students in attaining their educational goals.

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**FINAL REPORT**

The National Center for Education Statistics Beginning Postsecondary Students Longitudinal Study revealed that 53% of entering community college students have parents who have never attended a post-secondary institution (Choy, 2001). Even with the increased enrollment of first-generation students in community colleges, which are typically more accessible than four-year colleges, first-generation students are at greatest risk for non-persistence (Advisory Committee on Student Financial Assistance, 2006). Given the importance of maintaining our competitiveness in the global economy, it is of paramount importance to understand the college experience and barriers that these first-generation students face while pursuing their educational goals, particularly since they represent the majority of the nation's freshmen in community colleges. Community colleges have experienced significant growth especially in the number of students from low to moderate income families. Although there has been a growing interest in first-generation college students, the majority of studies have examined first-generation students that attended four-year colleges.

There has been an exploration of academic preparedness, demographic characteristics, college choice, and degree goals of first-generation, four-year

college students. Compelling evidence from studies conducted to examine first-generation four-year college students have indicated this group of students is at a distinct disadvantage with regard to their understanding of the financial aid and college admission processes, making informed decisions regarding their ability to pay for college, and having the recommended core high school coursework (Horn and Nunez, 2000; Terenzini, et al., 1996; Wartburton et al, 2001).

Another area of research has examined first-generation college students with regard to their transition from high school to college. These transition studies revealed that first-generation students have greater difficulty integrating into the college environment than do their counterparts (Rendon, et al., 1996; Terenzini et al., 1994). The third area of research on first-generation college students examined the probability of persistence in college and attainment of their degree (Pascarella and Terenzini, 2005). These studies have indicated that first-generation students are more likely to leave school at the end of their first year (Advisory Committee on Student Financial Assistance, 2006).

Very few studies were found that explored the college experience, cognitive development, and psychosocial attainment of first-generation college students. This fourth area of research indicated that first-generation college students were more satisfied with their community college experiences than other college students (Nomi, 2005). College experience studies have revealed that first-generation students were employed more hours per week while attending college, completed fewer credit hours, and studied less than their peers (Nomi,

T., 2005; Terenzini et al., 1996). Of all of the studies on first-generation college students, few have addressed the impact of the college experience on their psychosocial attainment, and few, if any, have conducted such research on the community college constituency.

A useful body of research for continuing studies in the area of college experience and psychosocial attainment of first-generation college students, was the theoretical perspectives of social capital. Social capital is the form of capital inherent in the dynamic of relationships between individuals that enable such individuals to benefit (Bills, 2000). Research in this area has indicated that students with highly educated parents are more likely to have an advantage over first-generation college students with regard to their ability to acclimatize to their college environment since they are more likely to understand the culture of higher education (Coleman, 1988). First-generation students are more likely to be disadvantaged in understanding the extent of the impact a post-secondary education can have on their future social and economic attainment. This lack of understanding may translate to a less influential college experience for first-generation college students, including a differential effect on cognitive and psychosocial outcomes (Pascarella, et. al, 2004).

Previous research has indicated first-generation college students, overall, are disadvantaged with respect to family financial support, access to basic post-secondary planning resources, and setting educational goals. There was not much information regarding the impact of college experiences and outcomes on the

psychosocial development of community college students and it was clear that additional research needs to be done in this area (Pascarella, et al., 2004). Additionally, the majority of the first-generation college student literature focused on first-generation students who entered a four-year college (Bailey and Alfonso, 2005). Since first-generation students are more likely to enroll in community colleges when they begin their postsecondary education, it was beneficial to continue research efforts directed toward examining the impact of community college experiences on first-generation student outcomes, and including the psychosocial development facet.

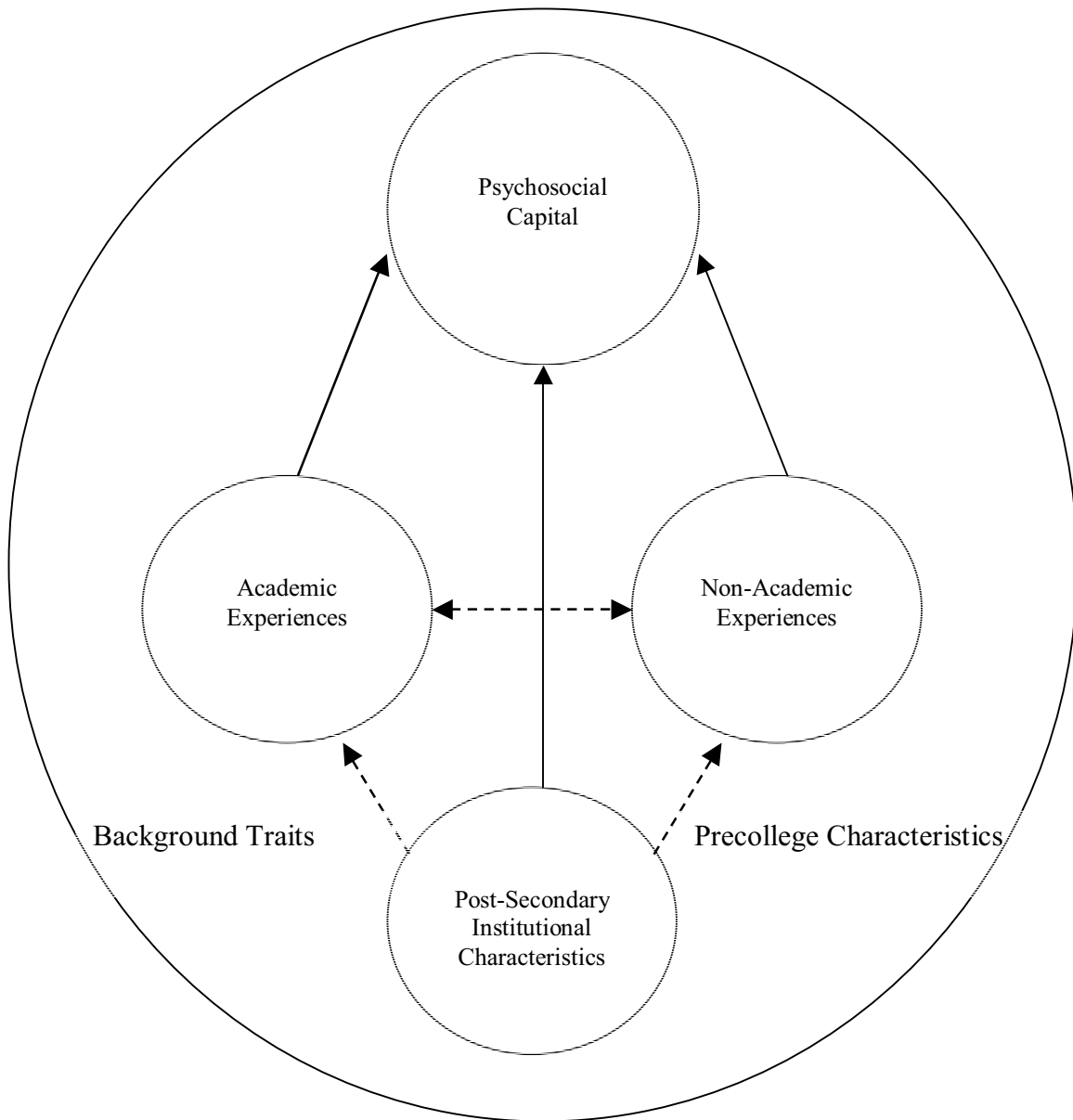
The conceptual framework for this study was based on research investigations regarding first-generation college students and was consistent with the work of Astin (1992). Astin's results suggested that four areas needed to be taken into account in order to understand the impact of the college experience on students:

- (1) Demographics and precollege characteristics,
- (2) Institutional characteristics,
- (3) College academic experiences, and
- (4) College non-academic experiences.

Educational outcomes research has suggested that academic and non-academic experiences impact both college and social outcomes of students (Terenzini, et al., 1996). An examination of these additional factors helped to expand our understanding of the community college experience of first-

generation students and the impact on their academic and social attainment (see Figure 1).

Figure 1. The relationship among factors effecting the college experience.





In order to address the goal of the study, three stages of research were conducted. The first stage consisted of providing a profile of first-generation community college students. The second stage consisted of an examination of the differences between first-generation and other community college students in their academic and non-academic experience of college. The third stage explored the differences between first-generation and other community college students on psychosocial development variables.

*Beginning Postsecondary Students 1996-2001 Dataset*

The study utilized the Beginning Postsecondary Students (BPS) 1996-2001 dataset of the National Center for Educational Statistics. The BPS 1996-2001 followed a cohort of students who started their postsecondary education during the 1995-1996 academic year. The BPS dataset is unlike other national longitudinal datasets currently available. The BPS dataset is comprised of individuals who first began their post-secondary studies in the 1995-1996 academic year, regardless of when they completed high school. Therefore, this dataset represents both traditional age (17-21) and nontraditional age students. This is a very important sampling issue since first-generation college students are less likely to be of traditional college age (Nomi, 2005).

The BPS 1996-2001 dataset served to improve our understanding of the college experience and psychosocial attainment of first-generation community college students by utilizing a nationally representative longitudinal dataset. The BPS 1996-2001 dataset provided sufficient n-counts to support the statistical

methods used for the research, as well. The data set consisted of approximately 42% of students whose parent's highest level of education was a high school diploma or less. Of those students, 57% pursued their postsecondary education at a two-year college.

To gain a clearer understanding of first-generation community college students as a discrete population, the responses of first-generation students (defined as students whose parents have had no postsecondary education) were compared with those received by their peers, defined as follows:

- MPE (moderate parental education) students: At least one parent has received some postsecondary education, but neither parent has earned a bachelor's degree.
- HPE (high parental education) students: At least one parent has earned at least a bachelor's degree.

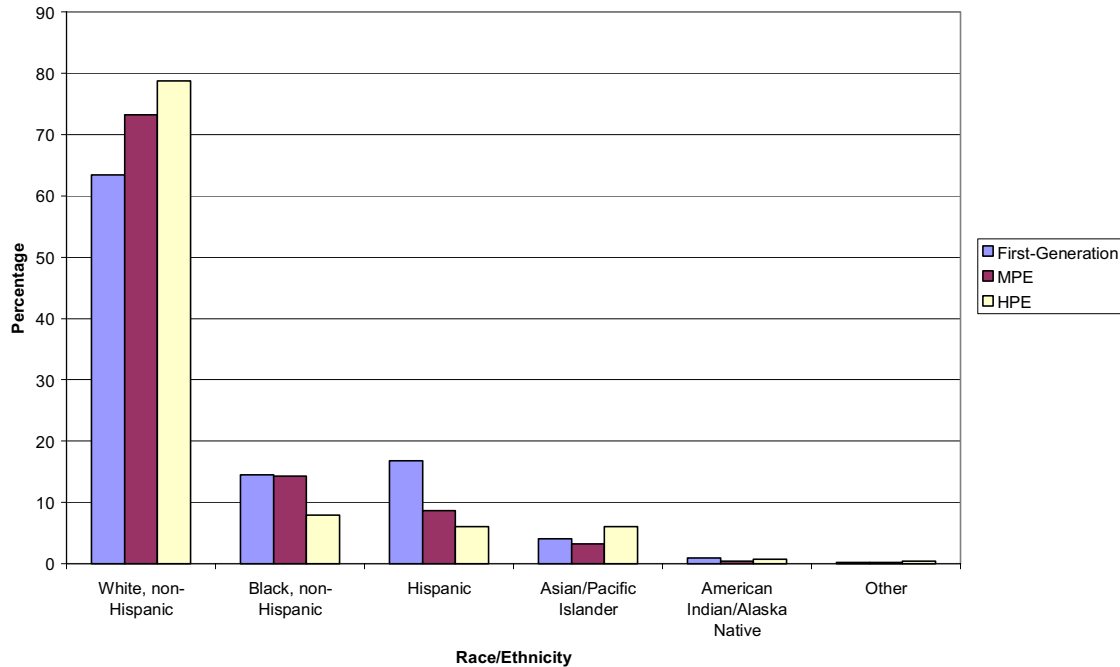
Data were available for 2,952 community college students in the longitudinal study consisting of 1,314 first-generation students, 552 MPE students, and 1,086 HPE students.

### *Stage I*

The first stage of the analysis consisted of developing a profile of the first-generation community college student population and their community college peers, as well as the institutional characteristics of both groups. The majority of

students attending community college are White/non-Hispanic, regardless of parental level of education (see Figure 2). However, there was a notable

Figure 2. Race/Ethnicity of Community College Students from BPS 1996-2001 Cohort



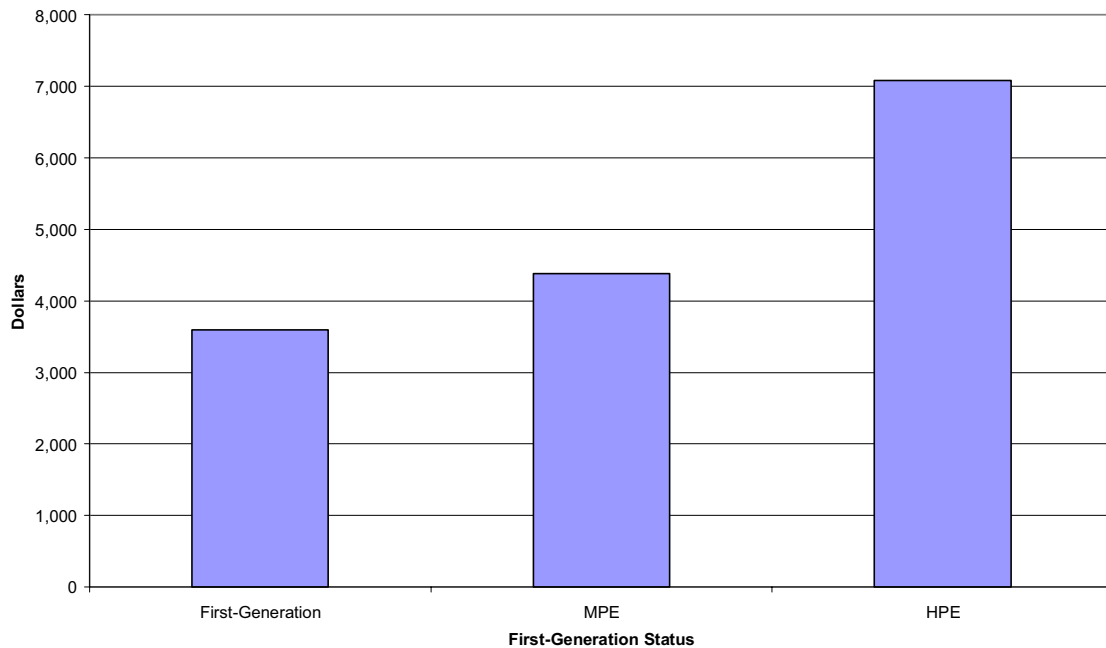
difference among Hispanic students attending community colleges. First-generation Hispanic students were enrolled at a rate of 16.8%, whereas only 8.7% of community college Hispanic students were from a MPE family, and 6.1% of Hispanic students were from a HPE family. An examination of the gender of the enrolled community college students in the longitudinal dataset revealed 60.1% of first-generation community college students were females, 59.1% of MPE community college students were females, and only 47.0% of HPE community college students were females. Regardless of first-generation student status, the vast majority of all enrolled community college students were U.S. citizens. When reported in 1995, 92.5% of first-generation students were U.S.

citizens, 96.7% of MPE students were U.S. citizens, and 93.4% of HPE students were U.S. citizens. Overall, only 0.5% of the students were non-U.S. citizens that were ineligible for student aid.

First-generation students tended to be older than their non first-generation counterparts. Upon entering their first post-secondary institution, first-generation students were an average of 25.1 years old. Students from a MPE family entered college at an average of 20.3 years of age and students from a HPE family entered college at an average age of 19.4 years of age.

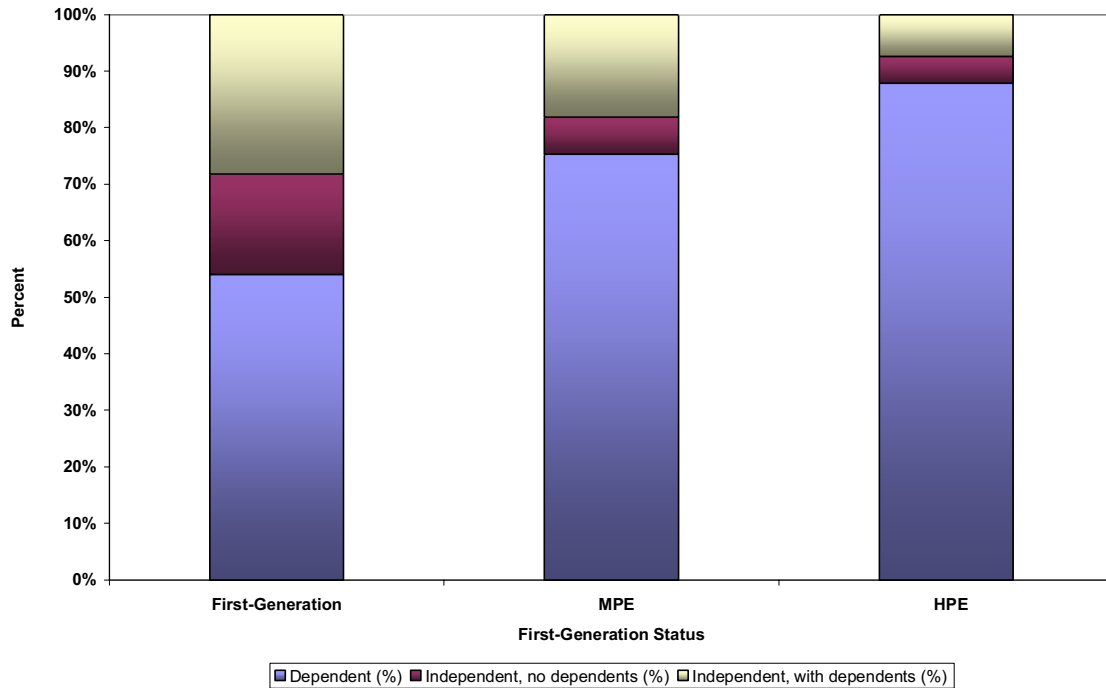
As anticipated, the average expected family contribution toward first-year college costs for first-generation students (\$3,593) was approximately half of the average family contribution amount for HPE students (see Figure 3).

Figure 3. Expected Family Contribution Toward First Year Expenses of First-Generation, MPE and HPE students.



The majority of students (68.6%), regardless of parental level of education, were considered dependent students. However, a larger number of first-generation students were considered independent students with their own dependents (28.2%). Approximately 18.1 percent of students from an MPE family were considered independent students with their own dependents, and only 7.1 percent of HPE students were considered independent with their own dependents (see Figure 4).

Figure 4. Dependency Status for First-Generation, MPE, and HPE Students



Such results, one might suggest, tend to reduce both, the time for, and level of, students' involvement in on-campus academic and nonacademic activities, tending to remove students from a broader exposure to more students and to the general campus culture. These results support the notion that community college

students have more demands and external/family responsibilities than traditional-aged, four-year college students.

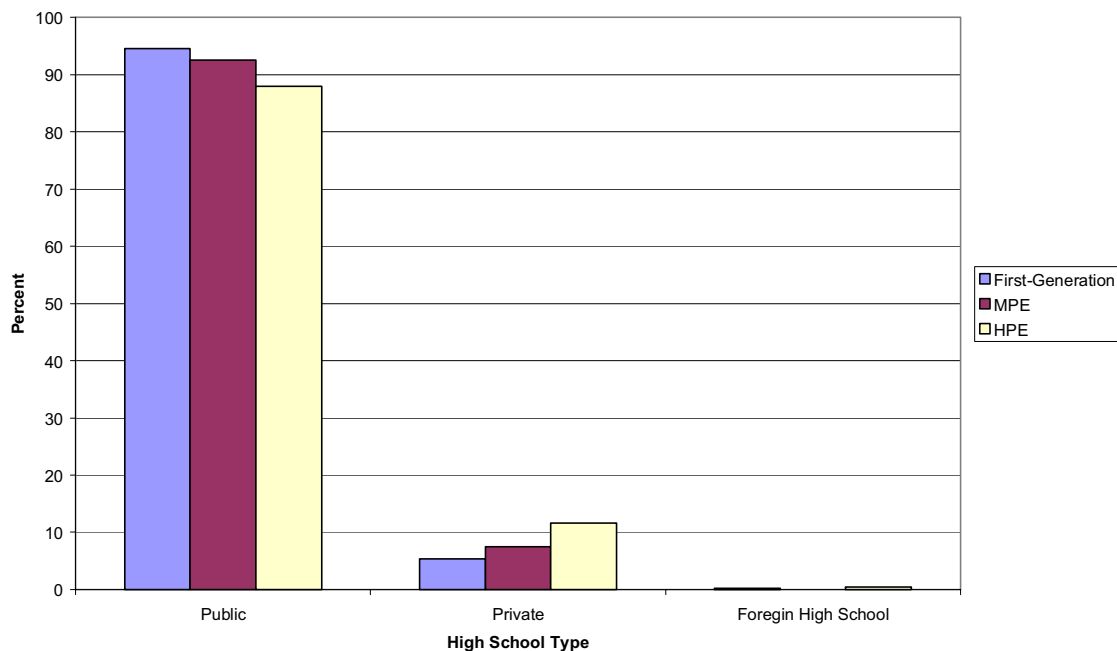
With the number of students indicating they had their own dependents, it was interesting to examine the reported goal of living close to their home while attending college. First-generation students reported they wished to attend college close to their home at the highest rate with 59.5 percent reporting they wished to attend college close to home and 40.5% first-generation students reported they did not have the goal of attending college close to home. Approximately 56 percent of students from an MPE background (55.8%) reported they wished to attend college near their home. Even though HPE students ranked the lowest of the three groups reporting they wished to attend college close to their homes, more than half (51.4%) reported this as one of their goals.

An examination of the institutional characteristics of this group of students, and their counterpart, included an examination of the type of high school the student attended, the community college student budget - adjusted for full-time and part-time attendance, and the percentage of minorities enrolled at the first post-secondary institution in which the student attended. The majority of students in the sample attended a public high school, with the largest percentage of students who attended a private high school being from a HPE family (11.6%), with only 7.6 percent of MPE students reported they attended a private high school (see Figure 5). As expected, the lowest percentage was found

for first-generation students, with only 5.4 percent indicating they attended a private high school.

An examination of the community college budgets of the students' first institution of enrollment, adjusted for full-time and part-time status, revealed that on average, first-generation students attended colleges with lower budgets than their counterparts. Figure 6 shows the averages for first-generation, MPE, and HPE students. The largest average budget was observed for the HPE students (average adjusted budget of \$6,595.90). This is considerably higher than the adjusted budget for the first-generation and MPE students with college budgets of \$5,113.10 and \$5,556.30, respectively.

Figure 5. High School type attended for First Generation, Moderate, and High Parental Levels of Education

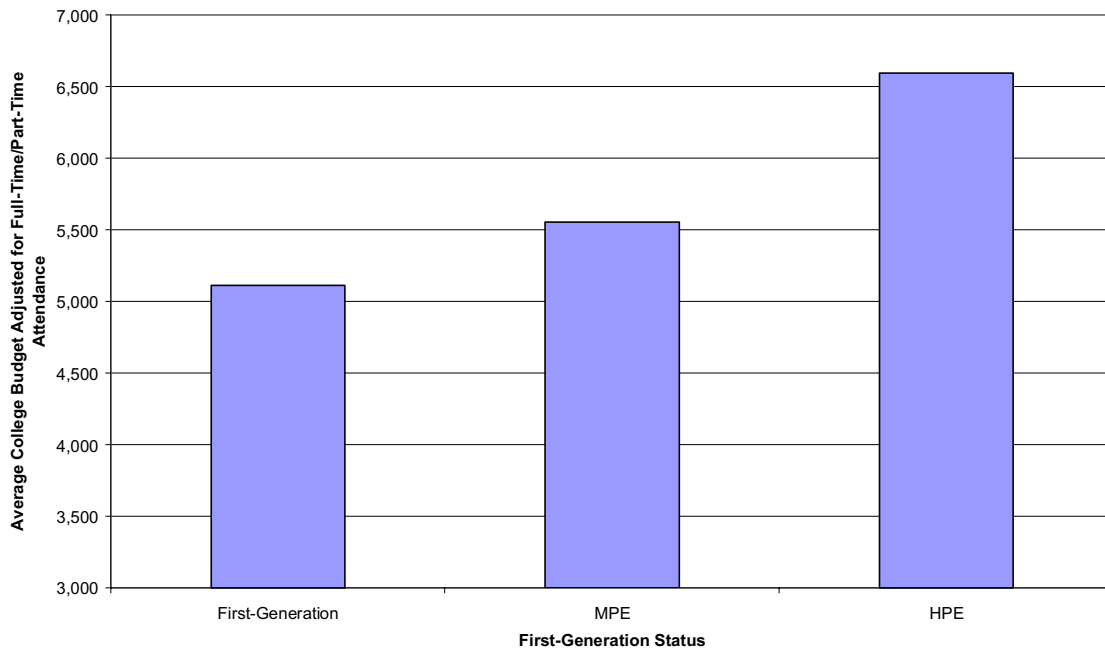


and HPE students. The largest average budget was observed for the HPE students (average adjusted budget of \$6,595.90). This is considerably higher

than the adjusted budget for the first-generation and MPE students with college budgets of \$5,113.10 and \$5,556.30, respectively.

In order to gain an understanding of the ethnic diversity of the two-year post-secondary institution students initially attended when they first enrolled, the

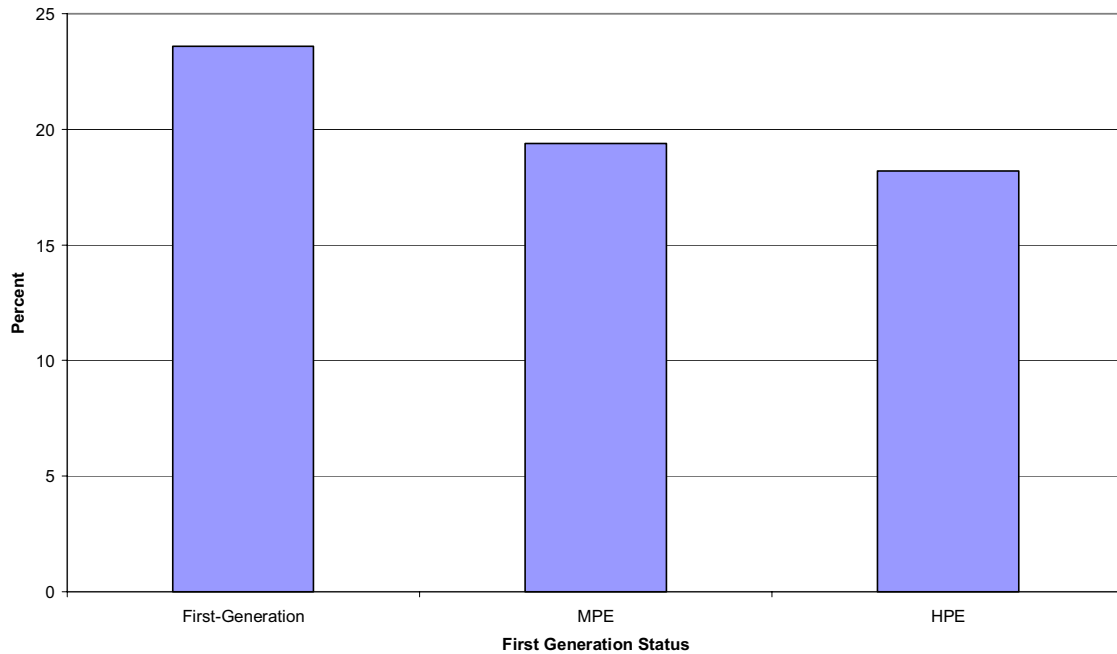
Figure 6. Average college budget per student adjusted for full-time and part-time attendance for First Generation, Moderate, and High Parental Levels of Education



analyses included an examination of the percentage of minorities enrolled, reported by the two-year college. The results are presented in Figure 7. First-generation students attended colleges with a higher minority enrollment rate (23.6%) than MPE students and HPE students. The minority enrollment rate for the institutions of MPE students and HPE students were very similar. The average percentage of minorities enrolled at the institutions of MPE students was



Figure 7. Percentage of Minorities enrolled at the first institution attended for Moderate, and High Parental Levels of Education



19.4 percent. The average percentage of minorities enrolled at the institutions of HPE students was 18.2 percent.

Consistent with previous research, the findings suggest that compared to other students, first-generation college students tend to be disadvantaged in terms of the institutions they attend. This was particularly evident when the comparison between first-generation students and students whose parents had a high level of postsecondary education. While this finding may not be particularly surprising, given its consistency with other studies (e.g., Choy, 2001), the finding is striking in that it persists in this analysis that controls for community college attendance.

## *Stage II*

The second stage of the analysis consisted of regressing academic and non-academic variables, including:

- 1) the total number of months enrolled in any post-secondary institution as of 2001,
- 2) academic success defined by college GPA reported in 2001,
- 3) reported annual salary in 2001, and
- 4) degree type attained through 2001;

on first-generation status (as defined for the Stage I analysis), sex, race, age, parent-income level, community service participation in high school, educational goals as indicated in high school, remedial college coursework during first year of college as a proxy for academic preparedness, and pre-college attribution toward social attainment derived by the following goals reported by the students:

- a) being a leader in the community,
- b) becoming an authority in a field,
- c) influencing a political structure,
- d) succeeding in a career, and
- e) being well off financially.

The operational definitions of each of the variables are presented in Appendix A.

The results of the regression analysis are presented in Table 1.

Table 1. Estimated Effects of Level of Parental Postsecondary Education (versus First-Generation Students) on Phase II Outcomes

Group	Degree Attainment		Academic Success		Salary		Number Months Enrolled in College	
	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance
High Parental Education Level <sup>a</sup>	0.038	p<.05	0.67	p<.01	0.072	p<.01	0.05	p<.05
Moderate Parental Education Level <sup>a</sup>	-0.046	p<.05	0.57	p<.01	0.031	p<.05	0.073	p<.05
Model R <sup>2</sup>	0.10		0.11		0.11		0.17	

<sup>a</sup> Comparison group is first-generation community college students

<sup>b</sup> Equations also includes controls for: all other factors introduced into the research design

It appeared the disadvantages accrued to first-generation students in attending institutions with lower expenditure dollars (adjusted for full-time and part-time status) and more family responsibilities (see Phase I results), translated into a similar pattern of disadvantage when examining degree attainment. At the end of the five-year study, first generation students had lower levels of attainment than MPE and HPE students. In this analysis, first-generation students made significantly smaller increases in the highest degree they planned to obtain than did the higher parental education groups. This may also be a function of differences between the two groups in the social/cultural capital they bring to college. It has been established that students with highly educated parents may be more aware of the importance that advanced degrees play in one's occupational life and labor-market opportunities than their first-generation counterparts.

However, in a follow-up examination of the direction of effects, there was evidence suggesting that first-generation students who persisted, had more academic success, as measured by their cumulative GPA reported in 2001, than their first-generation counterparts (see Table 2).

Table 2. Grade point average (GPA): cumulative in 2001

	Mostly A's (%)	A's and B's (%)	Mostly B's (%)	B's and C's (%)	Mostly C's (%)	C's and D's (%)	Mostly D's or below (%)
Total	12.5	28.3	36.2	16.1	5.9	1.1	0.1
First-Generation	14.7	28.7	38.2	12.6	4.8	0.9	0.1
MPE	12.7	30.3	34.9	14.7	7.1	0.4	0.0
HPE	8.9	28.6	35.3	19.8	5.6	1.6	0.1

Additionally, at the end of the five-year longitudinal study, first-generation students had only modestly lower income levels than other students. First-generation students reported average earnings of \$26,254.30 in 2001, whereas students from an MPE background reported average earnings of \$27,434.50. Students from an HPE background reported the highest earning average of \$28,909.80. Although a statistical significance ( $p < .05$ ) was observed for the overall regression model for salary (see Table 1), the practical significance was not as great. Furthermore, when job satisfaction was examined for 2001, the results indicated first-generation students were more satisfied with their jobs than MPE and HPE students. Eighty-five percent of first-generation respondents indicated they were satisfied with their 2001 (current) job. Approximately 80 percent of MPE students indicated they were satisfied with their jobs and 82 percent of HPE students indicated they were satisfied with their jobs.

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The five-year gains by first-generation students in the number of months enrolled in a post-secondary institution were somewhat lower than those made by their peers. A follow-up examination of the data revealed that first-generation students were enrolled for an average of 28 months during the five-year period, students from an MPE background were enrolled for an average of 32 months during the five-year period, and students from an HPE background were enrolled for an average of 38 months during the five-year period.

Consistent with previous research, these findings suggest that compared to other students, first-generation college students tend to be significantly handicapped in terms of attainment and persistence. First-generation students attended college for fewer months than other students in the five-year period. This was particularly evident when the comparison was between first-generation students and students whose parents had a high level of postsecondary education. While this finding may not be particularly surprising, given its consistency with other studies (Choy, 2001), the finding is notable since it persists in a study that controls for community college attendance. First-generation students still tended to be enrolled in institutions that, on average, have significantly lower budgets, adjusted for full-time and part-time student, than their peers. Even with these tendencies toward disadvantage, this study revealed that first-generation students are not disadvantaged with respect to their academic success (cumulative GPA in 2001). This result was somewhat surprising, but understandable, supporting the contention that first-generation

students are unable to persist and attain due to external factors, not because they lack the academic aptitude to succeed.

### *Stage III*

Because first-generation students are more likely to enter college with less cultural/social capital than their peers, it may be that the college serves as a compensatory experience, regardless of whether or not degree attainment is observed. Therefore, the third stage of the analysis examined the differences between first-generation community college students and their peers on variables selected from the BPS 1996-2001 dataset that best represented their initial college experiences as well as psychosocial attainment in 2001. The variables used for the regression/logistic regression analysis consisted of the following survey items or derivation of items:

- 1) overall satisfaction with their first institution,
- 2) social integration into their first institution,
- 3) academic integration into their first institution,
- 4) intellectual growth, and
- 5) community service, including voluntary work in PTAs, community centers, youth organizations, hospitals, etc. in 2001.

The operational definitions of each of the variables are presented in Appendix B.

The results of the regression analysis are presented in Table 3.

The results are all analyses were significant at  $\alpha=.05$  and it was apparent that there was an effect of the parental level of education on each of

the outcome variables examined. Although they reported modestly lower levels of satisfaction with their social integration and academic acclimation at the

Table 3. Estimated Effects of Level of Parental Postsecondary Education (versus First-Generation Students) on Phase III Outcomes

Group	College Satisfaction		Social Integration into College		Academic Acclimation at the College		Intellectual Growth		Volunteerism (2001)	
	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance	Beta <sup>b</sup>	Significance
High Parental Education Level <sup>a</sup>	0.038	p<.05	0.084	p<.05	0.06	p<.05	-0.121	p<.05	0.12	p<.01
Moderate Parental Education Level <sup>a</sup>	0.04	p<.05	0.066	p<.05	0.015	p<.05	-0.056	p<.05	0.16	p<.01
Model R <sup>2</sup>	0.05		0.15		0.14		0.071		0.09	

<sup>a</sup> Comparison group is first-generation community college students

<sup>b</sup> Equations also includes controls for: all other factors introduced into the research design

institution in which they first enrolled. Despite their disadvantages, first-generation students reported to be more satisfied with their overall college experiences than other students.

There were also counterbalancing results to the disadvantages that occurred in Stage II. The results suggested the five-year gains in self-reported intellectual growth made by first-generation students were actually larger than those made by their peers. A follow-up analysis revealed that 93% of first-generation students reported they experienced intellectual growth, with only 86% of HPE students reporting the same result.

In order to examine the effect college attendance may have on social/cultural capital, this study examined the volunteer activities reported in 2001. The regression analysis was significant, with a parental level of education

effect, with the greatest volunteerism reported for students from a HPE background. However, an examination of volunteerism reported in 1995 and in 2001 revealed that first-generation students maintain their level of volunteerism over the five-year period (26% reported in 1995-96 and 25% reported in 2001). Students with a HPE had a decline in volunteerism from 1995-96 to 2001 with reported volunteerism going from 37 to 32 percent.

### *Summaries and Conclusions*

Increasingly more students are attending post-secondary institutions as they recognize the importance of a college education for securing employment and a higher standard of living. And community colleges have experienced the most growth, especially in the number of students from low to moderate income families. First-generation college students from families where neither parent had more than a high school education constitute the majority of the freshman class of community colleges (Choy, 2001). Although there has been a growing interest in first-generation college students, the majority of studies have examined first-generation students that attended four-year colleges. This study examined the college experiences and cognitive development of a cohort of first-generation community college students and has provided a framework for understanding the barriers faced by first-generation community college students.

Postsecondary education is the key to a stronger workforce for our nation and a higher standard of living for our citizenry (Lotkowski, et al, 2004). Better educated people have a better chance of obtaining secure jobs that provide



opportunities for advancement, pay higher wages, and offer greater health and retirement benefits than do those who are less educated. In addition, an increase in the number of citizens with a postsecondary education correlates with decreased unemployment and public assistance (Van Der Linden, 2002). This study analyzed longitudinal data from a cohort of community college students who entered their first post-secondary institution in 1995-96 to better understand differences between first-generation and other college students in the experience and outcomes of postsecondary education. First-generation college students were defined as students whose parents had no more than a high-school education. This study compared first-generation students with two other groups: students having at least one parent has received some postsecondary education, but neither parent has earned a bachelor's degree; and students having at least one parent who had attained a bachelor's degree or above. The longitudinal nature of the data analyzed permitted statistical controls for an extensive battery of analyses, including parental income, educational aspirations, academic motivation, civic involvement, race, gender, age, and the like.

The findings suggest that level of parental postsecondary education has a significant effect on the budget-level of the institution a student attends, the nature of the academic and nonacademic experiences one has during college, and, to a modest extent, the cognitive and non-cognitive outcomes of college. Moreover, there were marked differences between first-generation and other college students in the influence of specific academic and nonacademic

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experiences on the outcomes of college. Specifically, this study has revealed that first-generation students are satisfied with their college experience and report intellectual growth after attending community colleges at the end of a five-year longitudinal study. Furthermore, the college experience itself, serves as a vehicle to increase the student's social/cultural capital, as evidence with a steady rate of volunteerism in their various communities.

Given the results of this study, it seems reasonable to suggest that measuring the success of a community college education should not be simply a matter of collecting attainment and persistence data. Efforts should continue to collect longitudinal survey data, such as the data available through the Beginning Post Secondary (BPS) 1996-2001 dataset. Recommendations for future work include developing an evaluation model for assessing the social/cultural attainment of community college students.

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## APPENDIX A - Glossary

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Stage II Variable Description	Variable Name
Total number of months enrolled at any institution through June 2001.	ENNUTT2B
Calculated annual salary-current job Note: This variable is a direct copy of QEINCC unless QEINCC=-1, in which case it was calculated using QEWAGEC and QETIMC. The following formula was used to calculate QEINCEC: if QETIMC=1 (hourly) $QEINCEC=QEWAGEC*2000$ if QETIMC=2 (weekly) $QEINCEC=QEWAGEC*52$ if QETIMC=3 (twice/mth) $QEINCEC=QEWAGEC*26$ if QETIMC=4 (monthly) $QEINCEC=QEWAGEC*12$ if QETIMC=5 (annually) $QEINCEC=QEWAGEC$ This formula assumes full-time work and does NOT take number of hours worked per week (QEHRSC) into consideration. Decimal amount rounded to the nearest integer. Outliers recoded to -6 ( $QEINCEC>140,000$ or $QEINCEC<100$ ). Imputed to the value of $QCENRHRS*QCENRWAG*52$ if respondent is enrolled as an undergraduate and working ( $QECUREMP=1$ and $QBCURENR=1$ and $QCENRHRS>0$ and $QCENRWAG>0$ ). Applies to: Currently employed respondents (who, if Currently enrolled, are not primarily students but did not provide their income in section C) ( $QECUREMP=1$ and ( $QBCURENR=0$ or ( $QBCURENR=1$ and $QCENRWAG$ not $>0$ ))).	QEINCEC
Types of degrees attained through June 2001. Combination of certificate, associate's degree, and bachelor's degree attainment. Assigned to zero if respondent did not have any attainment.	DGRETY2B
First-Generation Student/MPE/HPE Aggregated educational level of parent with greater Educational attainment, as reported by the parent respondent, or the student, if no parent CATI was obtained.	PBEDHI3

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Stage II Variable Description	Variable Name
Types of degrees attained through June 2001. Combination of certificate, associate's degree, and bachelor's degree attainment. Assigned to zero if respondent did not have any attainment.	DGRETY2B
Student gender based on student- or institution-reported gender, or gender reported on the FAFSA. Where gender not available, imputed based on student's first name.	SBGENDER
Race/ethnicity and citizenship status of student. All non-resident aliens placed in a separate category	SBRACECI
Indicates parents income, for students under 30, from the 1995 calendar year regardless of student's dependency status	PARINC95
Indicates whether the student reported participating in Community service or volunteer activities during 1995-96 (SGCOMSERV/SGCOM1--SGCOM6). Question wording: Did you do any community service or volunteer work during the past year, OTHER THAN COURT-ORDERED SERVICE?	COMMSERV
Highest degree expected at the first institution attended in 1995-96	DGEXPY1
Indicates whether student reported ever having taken any remedial or developmental courses in language (SILANG), math (SIMATH), reading (SIREAD), or writing (SIWRIT). NOTE: Does not include courses in study skills (SISTUD)	REMED2
Personal goals: Be leader in community	PGLEAD
Personal goals: Become an authority in field	PGAUTH
Personal goals: Influencing political structure	PGINFL
Personal goals: Succeeding in a career	PGSUCCAR
Personal goals: Being well off financially	PGFINC
Age derived from birth year	BDATE

## **APPENDIX B - Glossary**

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Stage III Variable Description	Variable Name
First-Generation Student/MPE/HPE. Aggregated educational level of parent with greater educational attainment, as reported by the parent respondent, or the student, if no parent CATI was obtained.	PBEDHI3
This variable indexes the overall level of satisfaction the respondent had with the NPSAS institution during the 1995-96 academic year. It is derived based on the average of the responses indicating their satisfaction with each of the following items: the campus climate regarding students of different racial or ethnic backgrounds (SNCLIMT), class sizes (SNCLSNZE), cost of attendance (SNCOST), any counseling services they had used (SNCNSL), course availability (SNCOURS), any cultural activities they had participated in (SNCULT), instructors' teaching ability (SNTEACH), their intellectual growth (SNINTELL), any job placement services they had used (SNJBPLC), the prestige of the school (SNPRSTG), social life (SNSOCLIF), and sports and recreational facilities (SNSPRTS)	SATISALL
This variable indexes the overall level of social integration the respondent experienced at the NPSAS institution during the 1995-96 academic year. It is derived based on the average of the responses indicating how often they had done the following items: attended fine arts activities (CMARTS), participated in intramural or non-varsity sports (CMINTRAM), participated in varsity or intercollegiate sports (CMVARSTY), participated in school clubs (CMCLUBS), or gone places with friends from school (CMFRIEND)	SOCINT
This variable indexes the overall level of academic integration the respondent experienced at the NPSAS institution during the 1995-96 academic year. It is derived based on the average of the responses indicating how often they had done the following items: participated in study groups (CMSTUDGP), had social contact with faculty (CMSOCIAL), met with an academic advisor (CMMEET), or talked with faculty about academic matters outside of class (CMTALK)	ACADINT
Satisfaction: Intellectual growth 1995-96	SNINTELL

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Stage III Variable Description	Variable Name
In the past year, have you participated in any community service activities other than court-ordered service	QFVOL
Satisfied overall-current job. Applies to: Currently employed respondents (who, if currently enrolled, are not primarily students) who are not self-employed reported in 2001 (QESAT8C)	QESAT8C
What is the highest level of education you ever expect to complete?	QFHIDEG