

Postsecondary Educational Decision-Making among First-Generation College-Bound Students in Okinawa Prefecture

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Abstract

Currently, approximately fifty percent of high school students across Japan go on to attend universities or colleges. In Okinawa prefecture, however, that figure is only thirty-six percent, the lowest regional rate in Japan. Taking into consideration the various social and psychological factors that affect the college decision-making process, such as Socioeconomic Status (SES) and parental influence, this study focuses on the experience of first-generation college-bound students on the premise that such students are more numerous in Okinawa than in many other prefectures in Japan, and that family legacy is therefore a significant factor in the prefecture's low rate of advancement. According to a 2012 report by the Japanese Statistics Bureau, Okinawa has in recent years been suffering from severe unemployment rates relative to the average rates in Japan as a whole. The economically difficult situation in Okinawa might therefore engender a belief among many parents, especially those who have never attended college themselves, that their children would be better off attending vocational school after graduating from high school in order to quickly secure practical employment and begin providing for the family. This study explores to what extent SES differences may be correlated with college destination among first-generation college-bound students in Okinawa, and also investigates parental influence on college selection in contemporary Okinawan society. The target population for this study consisted of four hundred college-bound high school seniors in Okinawa. Survey questionnaires were distributed to these four hundred seniors in five high schools in Okinawa to determine the primary factors that influenced their decisions to attend college. The results of this research reveal both the positive and negative aspects of college selection among first-generation college-bound students in Okinawa.

Keywords: first-generation student, post-secondary education, socio-economic status (SES), transition to college, academic achievement, cultural capital

1 Introduction

In Okinawa prefecture, only thirty-six percent of students decide to go on to college, the lowest rate in Japan, even though Okinawa has the highest fertility rate (Japan's Ministry of Health, Labor and Wealth, 2012). Various factors can offer insight into why many high school students in Okinawa do not want to go on to college. Japan has 47 prefectures, and Okinawa prefecture is located in the southern part of Japan. The prefecture is composed of three island groups (Okinawa Islands, Miyako Islands and Yaeyama Islands); this research targets the largest among these, the Okinawa Islands, where the capital city Naha is located.

This research examines how various social, cultural and psychological factors, such as Socioeconomic Status and parental influence, affect a first-generation college-bound student's decision to go to college. According to the National Center for Education Statistics (NCES) in the United States, first-generation college students are defined as "those whose parents' highest level of education is a high school diploma or less" (Nunez & Cuccaro-Alamin, 1998). In the United States, most first-generation college students share similar experiences, such as a low level of educational support from their parents, a low level of personal commitment to study, and poor knowledge and information about college options (Tym, McMillion, Barone, & Webster, 2004). This research explores to what extent socio-economic status (SES) may be correlated with college advancement among first-generation college-bound students in Okinawa, in addition to the parental and regional factors which may affect college selection in contemporary society. What social and regional factors might negatively influence the college-decision making process among high school students in Okinawa? According to the Okinawa Prefectural Board of Education, there are forty public general academic high schools leading to college or jobs after graduation, five private general high schools, and twenty public vocational high schools leading directly to employment, such as technical and agricultural high schools. Approximately 54,000 students are enrolled in high schools. There are also four public universities,

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three private universities, and two two-year private colleges in Okinawa.

This research focuses on the experience of first-generation college-bound students in Okinawa, and explores how they make decisions about college. The essential questions of this study were, given that many first-generation students have a low level of family support, a lack of knowledge and information about university education, and a low level of personal commitment, what motivates first-generation students to attempt to go to college? How can high schools in Okinawa help increase the rate of students who go on to college? If more first-generation students are to seek opportunities to study at institutions of higher education, universities and colleges may need to work on improving financial aid programs and other support programs for them. By considering first-generation students' decision-making factors, this research examines what factors are particularly influential on first-generation students' educational and occupational aspirations. It also explores factors influencing the low college attendance rates of Okinawan high school students.

2 The Concept of First-Generation College Students in Japan

It is important to note that the concept of the first-generation college student is not common in Japanese high schools or higher educational institutions, because many Japanese believe that parents' educational and financial backgrounds are not necessarily associated with a student's academic achievement or educational aspirations. Many American researchers have conducted surveys about first-generation college students (Tym et al., 2004), but in Japan not much research has focused on this group. Kawano (2003) states that universities and colleges will have to become more proactive in undertaking educational reforms for attracting more first-generation college-bound students.

Nishimoto (1998) notes that Japanese society is a meritocracy, and that admission to Japanese higher educational institutions is based on a meritocratic means of selection. The entrance examinations of Japanese universities and colleges only measure how much information students have memorized. The Japanese education system emphasizes a test score-oriented approach, and many Japanese do not see family background characteristics as a significant factor in students' academic success. By contrast, American researchers have found that parental educational background has a significant and direct effect on their children's academic achievement. As parental education levels increase, children are more likely to go to college (Hossler & Stage, 1992; Hossler, Schmit, & Vesper, 1999; Stage & Hossler, 1989). Hossler, Schmit, and Vesper (1999) also find that parents with college degrees tend to

value education and to transmit their educational values to their sons and daughters more than do parents with only high school degrees or less. Through their own college experience, parents of non-first-generation students can better explain to their children what college is like and how to prepare for the university entrance examinations. Considering these facts, it seems that parents' educational background significantly influences students' educational aspirations.

3 Problem

In Japan, the recent advancement rate of high school students to college has reached approximately fifty percent. Between 2000 and 2012, the percentage of high school students who advanced to college increased from 39 to 53.6 percent (MEXT, 2012). Since the number of young students has been dramatically decreasing in Japanese society corresponding to an overall decline in population, the quota of students to be admitted to college has become almost equal to the number of applicants for college admission. In such a situation, universities and colleges are no longer as concerned with enrolling the best students, and many are satisfied with merely finding students to fill their classrooms and to purchase their services. As college admission becomes less competitive, students may act more like consumers and view themselves less as candidates competing for admission. Many more first-generation college-bound students are entering universities and colleges and have a new set of expectations. Yet, in Japan the concept of a "first-generation college-bound student" does not exist. Japanese high schools and universities now need to understand the nature of first-generation college students and need to consider ways to ease the transition from high school to college.

In Okinawa, although college admission is becoming less competitive, only 36.7 percent of high school students decide to go on to college. The rate of students in Okinawa who go on to college is the lowest in Japan (Japanese Ministry of Health, Labor and Wealth, 2012). Whether this is because many students and their parents in Okinawa cannot afford college expenses, or because many parents do not value higher education, it is important to note that the unemployment rate in Okinawa is consistently the highest in Japan every year.

In Okinawa, many people work in tertiary industries, such as tourism, and individual annual income levels rank lowest in Japan. Income disparity between the annual income in Okinawa and the average annual income in Japanese society as a whole is significant. Considering this, it may be difficult for many parents to send their children to a private high school. According to the Okinawa Prefectural Board of Education, prefectural high school is free, whereas private high schools charge US\$4,000 per year. This reality

may reflect the low number of private high schools in Okinawa. There are only three private high schools, all of them successful academic-track schools that place over two-thirds of their students in colleges or universities. Given these success rates in comparison to the overall rate of college attendance, it is important to consider how SES differences may be related to access to private high schools leading to college. Considering these social and cultural factors, it is not unreasonable to assume that many high school students in Okinawa may be the first members of their families to apply to college. Even though, in light of recent population trends, students might no longer struggle to the same degree under the psychological pressure of entrance examinations and college competition, they are still likely to face concerns over who will cover their first-year college expenses.

4 Theoretical Perspective

There are many external and internal factors that work together when a first-generation college-bound student is deciding whether or not to go to college, and the intensity and strength of these forces may differ from student to

student. A theoretical model (Anderson’s Force Field Analysis) addresses students’ decision-making factors and helps in understanding the many causes of behavior that work together. Using Force Field Analysis helps to identify the driving forces (forces that push toward the fulfillment of goals) that influence a student’s decision to go to college, as well as the restraining forces (forces that resist and impede change) that hinder a student’s achievement and persistence once in college. According to Edward Chip Anderson’s (1985) ‘Forces Influencing Student Persistence and Achievement,’ “force field analysis” can be used to explain how these forces work to yield either attrition or persistence, and helps with establishing programs aimed at increasing academic persistence and achievement (see Figure 1). Some possible external forces affecting a student’s decision to go to college include parents, peers, culture, availability of information on college, teachers and counselors, and contact with people who have a college education and who are potential role models. Some possible internal forces affecting a student’s decision to go to college include academic skills, motivation to succeed and persist, pure enjoyment of learning, and confidence to undertake the challenges of college.

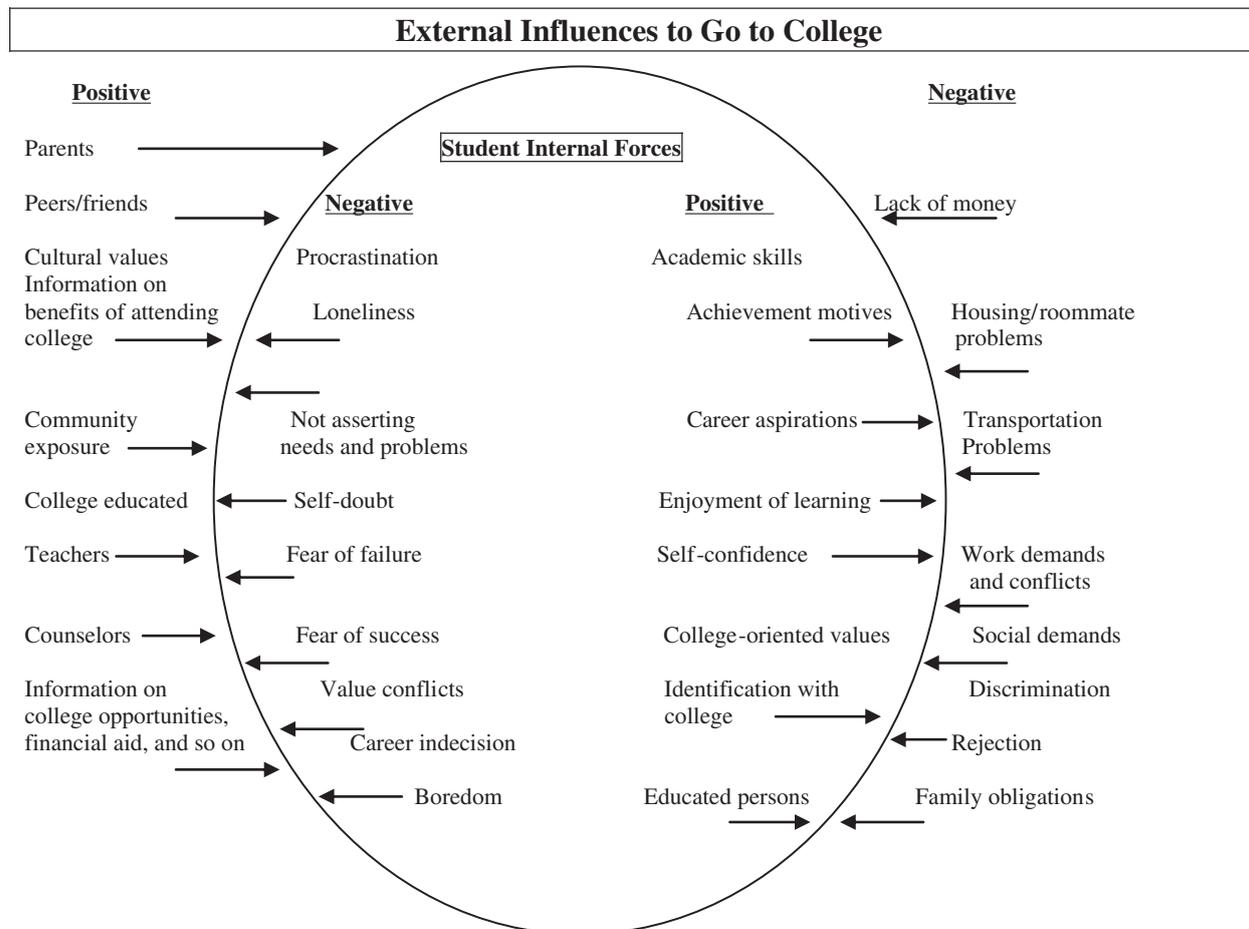


Figure 1 Force Field Analysis

Source: Anderson (1985, p. 50).

There are many obstacles and requirements that stand in the way of a college degree for many first-generation college-bound students, including rejection by family and friends who do not value college education, ethnic/racial discrimination, unfamiliarity with how to complete the admissions procedure, transportation problems, and so on. Anderson (1985) identifies two general categories of negative internal forces that hinder a student's ability to obtain a college degree: (1) self-defeating perceptions and behavior patterns and (2) confusion or indecision. Other possible negative internal forces include procrastination and other self-management problems, inability to assert needs and ask for help, fear of failure, fear of success, fear of rejection, and value conflicts. Anderson notes that, "students may feel that both success and failure can lead to rejection. Some family members and friends may reject a student just for going to college; this may make persistence very unlikely." He also notes that, "students from low-income homes may experience conflict because college keeps them from working to help support their families." Furthermore, he says that when a student moves away from home, he/she is also moving away from positive external forces, making it even harder to overcome these obstacles.

Using force field analysis can help to dissect these numerous external and internal causes in order to establish and implement appropriate programs to counter attrition. When it is used to explain attrition among low-income students, external factors include parents, peers and environment. Parents may not want their children to go to college because the children's income is needed at home or they may not see the importance of a college education. The peers of students from low-income groups are unlikely to attend college, which means that there is no culture of influence or peer pressure promoting college application. These low-income students may live in environments that provide little information about the value of a college education. Also, there may not be as many college-educated individuals in these communities that low-income students can look to as role-models. Furthermore, considering internal factors in the force field analysis, low-income students often have lower academic skills, and may be less likely to be interested in college. They may expect to have careers that do not require post-secondary education, while high-income students may attend schools with better teachers and curricula that promote greater interest in college.

5 Literature Review

5.1 First-Generation College Students in Japan

Many American researchers have conducted surveys about first-generation college students, but in Japan not

much research has focused on this group. Kawano (2003) states that universities and colleges will have to undertake more proactive educational reforms if they are to attract more newcomers, such as first-generation college-bound students. Kawano examines to what extent first-generation college students and non first-generation college students have different experiences in making decisions to advance to higher education. In the course of her study, Kawano conducted a paper survey of about 160 first-generation and non first-generation college students majoring in education at Japanese universities (this is called P in her study). She defined a first-generation college student as a student whose father did not graduate from a four-year university. She did not analyze individual student experience based on Socioeconomic Status (SES). In this study, she found that the ratio of male first-generation college students was slightly higher than the ratio of female first-generation college students. Also, many first-generation students graduated from middle- and small-size high schools (less than 300 students), and they did not go to high schools where ninety percent of students advance to four-year institutions. Approximately forty percent of first-generation college students came from high schools where less than fifty percent of students go on to college (Kawano, 2003).

Kawano also conducted a survey to explore the reasons behind the choice to advance to four-year institutions, and she found that the most cited reasons of first-generation college students were, "to study my own favorite subjects at college," "to obtain a Bachelor's degree," and "correlation with career choice." Another interesting finding is that only thirty percent of the first-generation students chose "to obtain a broad education." Thus, first-generation students are not likely to have an ambiguous reason for attending college, such as the general benefits of a liberal arts education.

Kawano, in her study, also found that most first-generation college students were likely to seek "teacher's advice" and "academic and career counselor's advice" regarding decisions about college, much the same as non-first-generation students. In this study, by contrast, most first-generation and non first-generation college students did not seek any advice from private cram school teachers, while their high school teachers played an important role in college decision-making.

Kawano's study indicates that parental pressure is not the most significant factor in college decision-making among either first-generation or non-first-generation college students. However, Kawano does not take into consideration SES factors. Over seventy-five percent of college-bound students in her study chose national universities with lower tuition and higher prestige. Twenty percent of both first-generation and non first-generation applicants also cited the

reason, “I can commute from my home” as their decision to apply. Given that most students cited both the fact that “the institution is a national university” implying exclusivity and “I can commute from my home” as deciding factors, is it then possible to conclude that these students may be classified as belonging to middle or low Socioeconomic Status (SES) families, in the absence of an explicit statement on SES status by Kawano? If Kawano had explored SES differences between first-generation and non-first-generation college students, the result in this particular study might have been an extremely effective illustration of how SES factors influence the decision making of first-generation college students.

6 Research Questions

- (1) How do first-generation college-bound students make decisions about attending college?
 - a. What are the differences between first-generation college-bound students and non-first-generation college-bound students regarding college planning?
 - b. What are the primary factors that influence decisions about attending college?
 - c. What externally and internally motivates first-generation and non-first-generation college-bound students to attempt to go to college?
- (2) Given the constraints imposed by social background factors, what role do external factors, such as SES differences and parental influence, play in the decision-making of first-generation college-bound students in Okinawa?
 - a. Are there any differences between the educational experiences of first-generation college-bound students from lower SES families and those of higher SES families?
 - b. How do gender differences affect decision-making in Okinawa, especially in relationship to socioeconomic differences?

7 Procedures

In this research quantitative surveys on paper were conducted at five public high schools in Okinawa. In Japan, the most successful academic-track high schools are measured by the number of students who are placed in elite universities. According to the Okinawa Prefectural Board of Education, four prefectural high schools have a college placement rate of over two-thirds of their students, and are classified as successful “high academic-track high schools.” The other prefectural high schools in Okinawa are classified as “low academic-track high schools,” where over two-thirds of the students do not go on to college.

There are three private high schools in Okinawa, and all of them are classified as successful academic-track schools. Since all the private high schools in Okinawa are successful academic-track schools, it was not possible to compare students from successful academic-track private schools with those from low academic-track private high schools. For this reason, the survey was conducted only in public high schools.

To conduct this research, it was necessary to contact a principal at each high school for permission to proceed. However, the principals were reluctant to grant permission to administer the questionnaires. Formal written requests were made to forty-one high schools in Okinawa via postal letter, e-mail and FAX, but responses were received from only five high schools. With their permission, the quantitative survey was conducted.

This research was conducted between October and November, when most seniors had already decided their future educational plans, whether academic or vocational. The quantitative survey took approximately 15 minutes to complete, which students did in class. Each high school has approximately 300 students in its senior class, and the questionnaire was given to approximately 100 seniors at each of the five high schools.

8 Quantitative Study

The questionnaire included questions on students’ educational background; the occupations of their parents; their choices regarding college; their attitudes toward their choices; and when they first considered going to college. Even though college admission is becoming less competitive in Japan due to an overall decline in population, many students in Okinawa still choose not to attend college. Since most existing research on college decision-making in Japan has not focused on parents’ education, this survey, in focusing on Okinawa, where college attendance rates are low, addressed first-generation college-bound students whose parents have high school degrees or less, in the interest of understanding the reasons for their decisions to apply to college.

In order to identify first-generation college-bound students of higher and lower SES families, the questionnaire asked the following questions: “what are your parents’ occupations?” “what is your parents’ annual income?” and “what is the highest level of formal education obtained by both your father and mother?” However, all five high schools were very uncomfortable with these questions, which were perceived to be sensitive because of Japan’s personal information protection law. In today’s high schools, most teachers are not allowed to ask for personal information concerning their students’ family

life. Fortunately, it was possible to ask about their parents' occupations and education levels, though only on the questionnaire.

Socio-Economic Status (SES) has a significant influence, and the main indicators of SES are parents' annual income, their highest level of education, and their occupations. Because of the restrictions on personal questions, SES was determined on the basis of only two indicators: Parents' occupations and their highest levels of formal education (see Table 1, Table 2 and Table 3).

9 Results

9.1 Description of the Sample

In this study, 543 high school seniors responded to a survey distributed in five high schools. Of the 543 students, 420 were college-bound, and 123 were vocational-track students who had decided not apply to college. Since this study examines college decision-making among college-bound students, only the data of college-bound students was used. The survey was relatively balanced with regard to gender (160 male students, 193 female students and 67 students who did not specify their gender). Thus, there were 353 responses (160 male students and 193 female

students), and the percentage of response was 84.0%. At Northern high school, 71 college-bound students (39 male, 32 female) responded. At Central high school I, 53 college-bound students (21 males, 32 females) responded, and at Central high school II, 48 students (38 males, 10 females) responded. At Urban high school, 94 college-bound students (26 males, 68 females) responded, while at Southern high school, 87 college-bound students (36 males, 51 females) provided responses.

9.2 First-Generation and Non-First-Generation College-Bound Students

College-bound students were asked about the highest level of education obtained by their parents. 5.7% of their fathers were at most a junior high school graduate, and 43.3% stopped their education after their high school graduation and had obtained only a high school degree. 6.2% of their fathers had attended a vocational school after high school. 1.7% of their fathers had earned only an associate degree, and 38.5% had earned a bachelor's degree. 2.5% of their fathers had earned a Master's degree or a Ph.D. With respect to the educational level of their mothers, 4% graduated only from junior high school, while 40.2% were high school graduates. 12.3% of their mothers

Table 1 Socio-Economic Status (SES) Classification

SES Classification	Total Score (both father and mother)	Expected Annual Income (US\$1 = JPN\80)
High SES	19-24 points	More than \$75,000
Middle SES	10-18 points	\$25,000 to \$75,000
Low SES	1-9 points	Less than \$25,000

Table 2 SES Indicator-1

The Highest Level of Formal Education	Score
Junior high school graduate	1 point
High school graduate	2 points
Vocational school graduate	3 points
Associate degree	4 points
Bachelor's degree	5 points
Graduate degree	6 points

Table 3 SES Indicator-2

Group	Parents' Occupations	Score
Group 1	Part-time worker, manufacturing, construction, truck driver, agriculture and forestry	1 point
Group 2	Mechanic, carpenter	2 points
Group 3	Store clerk, sales person, waiter, chef, beautician, receptionist, independent business person	3 points
Group 4	Technician, engineer, nurse, office clerk in a company, homemaker	4 points
Group 5	Teacher, police officer, firefighter, military	5 points
Group 6	Lawyer, medical doctor, certified public accountant, executive level position within a company	6 points

were vocational school graduates. 21.4% of their mothers had earned only an associate degree, and 21.4% had earned a bachelor's degree. Only 0.9% of their mothers held a master's degrees or higher.

In this study, college-bound students were classified into two groups: (1) students whose parents completed only high school or less and (2) students whose parents earned associate's degrees or higher. If one parent completed college and the other only high school, these students were classified into group. (1) Among college-bound students thus classified, 41.9% were first-generation college-bound students whose parents had completed high school or less ($N = 148$). 58.1% were non-first-generation college-bound students whose parents had earned an associate's degree or higher ($N = 205$). Of the first-generation students ($N = 148$), 47.3% were male ($N = 70$), and 52.7% were female ($N = 78$). Among the non-first-generation students ($N = 205$), 43.9% were male ($N = 90$), and 56.1% were female ($N = 115$).

9.3 Parents' Occupation

In the survey, college-bound students were also asked about their parents' occupations, age and hometowns. Parents' occupation and income are likely to affect a student's decision to go to college. Using Japan's occupational prestige rankings, parents' occupations were categorized into six groups (see Table 4).

Many fathers of non-first-generation students in Okinawa belonged to the managerial, professional, technological, or bureaucratic categories, which require a bachelor's degree or higher for entry. On the other hand, many fathers of first-generation students belonged to the skilled labor, law enforcement/security, and industry and transport categories, which do not require a bachelor's degree. With respect to mothers, many mothers of non-first-generation students in Okinawa belonged to the professional, technical, and bureaucratic categories, though many were also full-time homemakers. By contrast, many mothers of first-generation college-bound students belonged to the marketing, service industry, skilled labor, and industry and transport categories.

9.4 Socio-Economic Status (SES) Differences and Parents' Education

Differences in socio-economic circumstances are associated with differences in values among families, and also with different educational aspirations (Trent, 1970). SES factors thus can be expected to have a significant influence on student's decisions to go to college. SES was determined from two indicators (parents' occupations and highest level of formal education) among college-bound students in Okinawa (see Table 5). 56.8% of first-generation college-bound students were classified as belonging to a low SES family, and 43.2% to a middle SES family. None of the first-generation students were classified as belonging to a high SES family. On the other hand, 20.1% of non-first-generation students were classified as belonging to a high SES family, 76.3% to a middle SES family, and only 3.6% to a low SES family. The low-SES group of non-first-generation students is categorized as Group 1 (part-time worker, manufacturing, construction, truck driver, agriculture and forester). Where parental education levels are higher, the family's SES is high as well. Thus, the data indicates that Socio-Economic Status (SES) hinges on parents' education, and there is a causal relationship between SES and parents' education in this study.

Looking at the relationship between SES differences and parents' education, the two-sided asymptotic significance of Pearson's chi-square test is 0.000 (see Table 6). Where parental education levels are higher, the family's SES is high as well. Thus, the data indicates that Socio-Economic Status (SES) hinges on parents' education, and there is a causal relationship between SES and parents' education in this study (see Figure 2).

9.5 Investment in Supplemental Education for Elementary School Students

The next data analysis focuses on how long parents of college-bound students had their children enroll in supplemental education classes while they were elementary school students. Do only students with high- and middle-SES backgrounds attend supplemental education classes? Are there any SES differences in parents' educational

Table 4 Parents' Occupations

Group	Occupations
Group 1	Part-time worker, manufacturing, construction, truck driver, agriculture and forestry
Group 2	Mechanic, carpenter
Group 3	Store clerk, sales person, waiter, chef, beautician, receptionist, independent business person
Group 4	Technician, engineer, nurse, office clerk in a company, homemaker
Group 5	Teacher, police officer, firefighter, military
Group 6	Lawyer, medical doctor, certified public accountant, executive level position within a company

Table 5 College-Generation SES Cross Tabulation

		SES			
		High SES	Middle SES	Low SES	Total
First-Generation College-Bound Student	Count	0	54	71	125
	Expected Count	14.5	77.8	32.7	125.0
	% within College Generations	.0%	43.2%	56.8%	100.0%
Non-First-Generation College-Bound Student	Count	34	129	6	169
	Expected Count	19.5	105.2	44.3	169.0
	% within College Generations	20.1%	76.3%	3.6%	100.0%
Total	Count	34	183	77	294
	Expected Count	34.0	183.0	77.0	294.0
	% within College Generations	11.6%	62.2%	26.2%	100.0%

Table 6 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.156E2	2	.000
Likelihood Ratio	136.786	2	.000
Linear-by-Linear Association	108.228	1	.000
N of Valid Cases	294		

Notes: 0 cells (.0%) have expected count less than 5. The minimum expected count is 14.46.

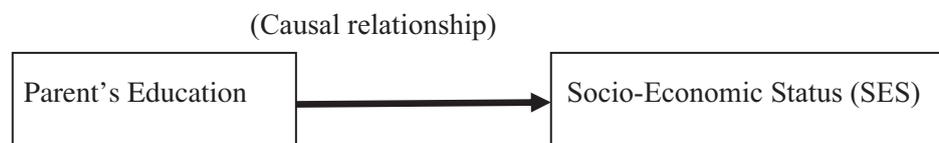


Figure 2 Model of Socioeconomic Status and Parents' Education

values with regard to elementary education? Many college-bound students attended private cram schools for lessons, including calligraphy, abacus, and piano, when they were in elementary school. Are there then any causal relationships between SES, parents' education, and investment in supplemental education? Did only high-SES and middle-SES families with college degrees send their children to private cram schools in Okinawa? Were parents with college degrees more likely to take an interest in their children's education than parents with high school degrees? The data indicates that 80% of parents of college-bound students sent their children to supplemental education classes when their children were in elementary school. 80% of first-generation college-bound students from low-SES backgrounds attended supplemental education classes, while 67% of non-first-generation college-bound students from low-SES families did so. In the middle SES groups, approximately 80% of first-generation students attended supplemental education classes, the same as for non-first-generation students. Using the Pearson's chi-square test to compare the proportion of SES differences

and the investment of supplemental education classes as an elementary school student, the two-sided asymptotic significance of the Pearson's chi-square test is 0.430 in the low-SES group (see Table 7). The data indicates that there is no causal relationship between parents' education and the investment in supplemental education, and also no causal relationship between SES differences and investment in supplemental education. Even low-SES parents with no college degrees were likely to spend money to enroll their children in supplemental education classes. Here is a model of parents' education, SES, and attendance of supplemental education classes among low-SES families (Figure 3).

However, the data does indicate that there is a causal relationship between parents' education and the attendance of supplemental education classes in the middle SES group. The data indicates that the two-sided asymptotic significance of the Pearson's chi-square test is 0.014 in the middle-SES group (see Table 7). In the middle SES group, if the parents held college degrees, they were more likely to send their children to supplemental education classes than parents with high school degrees or less. Below is a model

Table 7 Chi-Square Tests

		Value	<i>df</i>	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
High SES	Pearson Chi-Square	. ^a				
	<i>N</i> of Valid Cases	34				
Middle SES	Pearson Chi-Square	6.058 ^b	1	.014		
	Continuity Correction	5.077	1	.024		
	Likelihood Ratio	5.700	1	.017		
	Fisher's Exact Test				.021	.014
	Linear-by-Linear Association	6.025	1	.014		
	<i>N</i> of Valid Cases	182				
Low SES	Pearson Chi-Square	.623 ^c	1	.430		
	Continuity Correction	.070	1	.791		
	Likelihood Ratio	.559	1	.455		
	Fisher's Exact Test				.599	.364
	Linear-by-Linear Association	.615	1	.433		
	<i>N</i> of Valid Cases	77				

Notes: ^a No statistics are computed because College Generations is a constant.

^b 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.09.

^c 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.25.

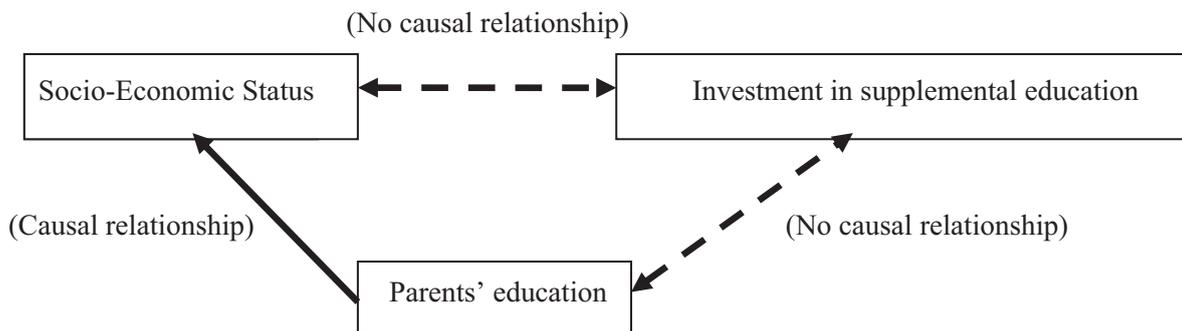


Figure 3 Model of Parents' Education, Socioeconomic Status, and Attendance of Supplemental Education Classes

of SES, parents' education, and investment in supplemental education for elementary school students in the middle-SES group (see Figure 4).

Thus, attending a private cram school does not necessarily hinge on Socio-Economic Status, and it also does not always hinge on parents' education. Since there was no high SES family among first-generation college bound students, it was not possible to determine whether there exists any relationship between high SES families, parents' education and investment in supplemental education classes.

9.6 Investment in Supplemental Education for High School Seniors

In Japan, many high school students attend a private cram school during their senior high school years because students and their parents think that their high schools may

not provide enough classroom time to prepare students for university entrance examinations. Also, most high schools do not offer any tutoring services after class, so some students with low-academic performance may need to attend a private cram school to catch up with their everyday lessons. The senior year is very important for college-bound high school students in Japan. This is when they prepare to choose and apply to a college. Many students attend supplemental education classes during this year, until they take the university entrance examinations. This section addresses the question: Are college-bound students from low-SES groups equally as likely to attend a private cram school to prepare themselves for the university entrance examinations as college-bound students in high-SES and middle-SES families? The data indicates that 33.8% of first-generation and 33.3% of non-first-generation students from low-SES families attended a private cram school. The two-

sided asymptotic significance of the Pearson's chi-square test was 0.981 in the low SES group (see Table 8). In the middle-SES group, 35.2% of first-generation and 42.6% of non-first-generation students attended supplemental education classes. The two-sided asymptotic significance of the Pearson's chi-square test was 0.349 in the middle SES group (see Table 8). Thus, the data indicates that there is no causal relationship between SES, parents' education, and attending a private cram school as a high school junior. The following is a model of the relationship (see Figure 5).

Considering that even first-generation students from low-SES backgrounds attended a private cram school, it can be said that neither SES differences nor parents' education necessarily influenced investment in supplemental education. It is important to note that the data indicate that gender differences also do not necessarily influence financial investment in supplementary education. Regardless of SES differences and gender differences, parents in Okinawa seem likely to spend money and time to enroll their children in private cram schools.

9.7 Student's First-Choice College

College-bound students were asked about their first-choice colleges. The majority of college-bound students in Okinawa were likely to apply to the University of the Ryukyus, a national university in Okinawa. An additional 24% were likely to choose a private university in Okinawa. On the other hand, 20% of the college-bound students planned to leave Okinawa to attend a public or private

university located elsewhere. Considering that 60% of first-generation, college-bound students belonged to low SES families, the presumption was that most first-generation students would plan to apply to a low-cost public university in Okinawa as a first-choice college instead of applying to private universities where the cost of tuition is higher. The data indicate that 40% of low-SES first-generation students were likely to apply to private universities in Okinawa, while only 30% were likely to apply to the public University of the Ryukyus. Moreover, only 20% of first-generation students from low-SES backgrounds were likely to apply to high-cost private colleges outside of Okinawa. Compared to first-generation students, 70% of non-first-generation students from low-SES backgrounds were likely to apply to a private college outside of Okinawa. 40% of both first-generation and non-first-generation students indicated that they would rely on scholarships. Apparently their families were unable to afford to pay for their children's college education, so these students were planning to rely on student loans to finance the high cost of college tuition. Thus, the cost of tuition was not necessarily a significant factor affecting a student's college decision-making process.

9.8 First Year's College Expenses among College-Bound Students

The data given above raises the issue of how students and their parents in the low-SES group pay college expenses. With regard to first-year college expenses (tuition,

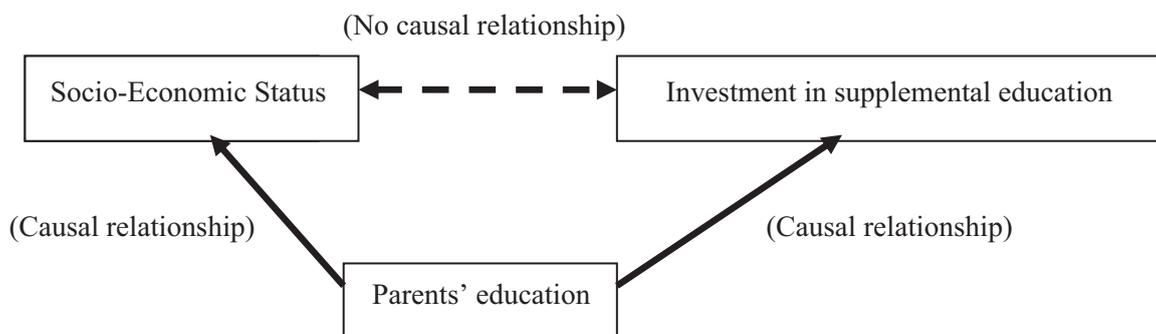


Figure 4 Model of Socioeconomic Status, Parents' Education, and Investment in Supplemental Education for an Elementary School Student

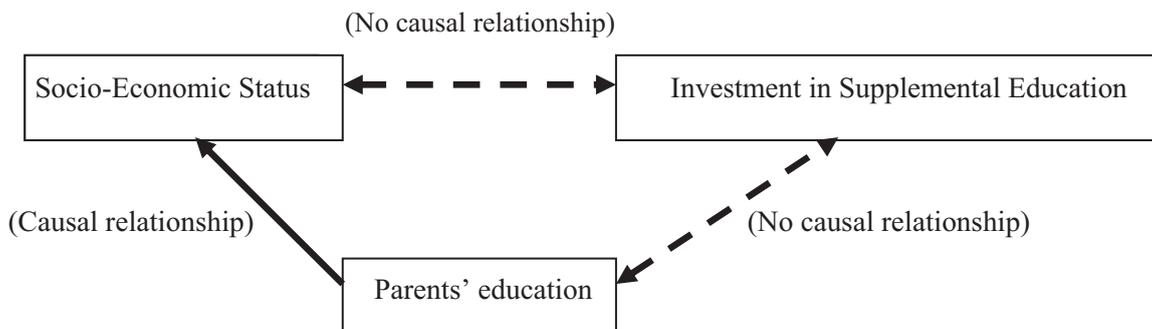


Figure 5 Model of Socioeconomic Status, Parents' Education, and Investment in Supplemental Education for a High School Junior

Table 8 Chi-Square Tests

		Value	<i>df</i>	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
High SES	Pearson Chi-Square	. ^a				
	<i>N</i> of Valid Cases	33				
Middle SES	Pearson Chi-Square	.877 ^b	1	.349		
	Continuity Correction	.595	1	.440		
	Likelihood Ratio	.886	1	.347		
	Fisher's Exact Test				.410	.221
	Linear-by-Linear Association	.872	1	.350		
	<i>N</i> of Valid Cases	183				
Low SES	Pearson Chi-Square	.001 ^c	1	.981		
	Continuity Correction	.000	1	1.000		
	Likelihood Ratio	.001	1	.981		
	Fisher's Exact Test				1.000	.676
	Linear-by-Linear Association	.001	1	.981		
	<i>N</i> of Valid Cases	77				

Notes: ^a No statistics are computed because College Generations is a constant.

^b 0 cells (.0%) have expected count less than 5. The minimum expected count is 21.84.

^c 2 cells (50.0%) have expected count less than 5. The minimum expected count is 2.03.

rent and living expenses), 84% of college-bound students indicated that their parents would pay. 38% also indicated that they would apply for scholarships to cover their first year's expenses, while 15.3% responded that their own resources (savings from part-time work) would cover their first year's expenses. A few students responded that they would rely primarily on educational loans. Was there a causal relationship between SES differences and plans for meeting first-year college expenses? Were first-generation students from low-SES backgrounds likely to rely more on scholarship money and their own resources than other students from different SES groups? Regardless of the SES differences, the data shows that over 80% of parents of both first-generation and non-first-generation students would cover their children's first-year college expenses. Even low-SES families invested money to send their children to college.

In the low-SES group, 16% of first-generation students indicated that they would rely on their own resources to cover their first year's expenses. In the middle-SES group, 19% of first-generation and 16% of non-first-generation students planned to use their own resources to cover their first year's expenses. With regard to scholarships, approximately 50% of both first-generation and non-first-generation students indicated that they would rely on scholarships. In the middle-SES group, 40% of both first-generation and non-first-generation students indicated that they would rely on scholarships. Considering the data

above, there appears to be little causal relationship between SES differences and first-year college expenses.

9.9 The Single-Most Influential Person in Students' Decisions to Go to College

Students were asked to answer who was the single-most influential person affecting their decision to go to college. In the high-SES group, 30% of non-first-generation students indicated that their fathers most influenced their decisions to go to college, while 20% indicated their mothers were the primary influence, and 10% their elder brothers. In the middle-SES group, 30% of first-generation students responded that their mothers influenced their decision to go to college, while 15% indicated peer influence. 30% of non-first-generation students from middle-SES backgrounds indicated that their mothers most influenced their decisions to go to college, while 20% indicated their fathers. 12.7% of non-first-generation students indicated that their peers influenced their decisions.

In the low-SES group, only four non-first-generation students indicated their mother, elder brother, cousins, and peers, respectively, were the single greatest influence. Among first-generation students, 30% indicated that their mothers influenced their decision, while 20% indicated peer influence. 10% indicated their fathers. Considering the data given above, with the exception of non-first-generation students from high-SES backgrounds, the mother was generally the most influential person. In the high- and middle-SES groups, the data shows that parents were the

most significant force influencing non-first-generation students' decision to go to college. In the middle- and low-SES groups, first-generation students indicated that peer influence had a strong positive relationship to college decision-making, and it seems that school environment was a primary influence for students whose parents had never earned college degrees. If students in the high- and middle-SES groups had elder siblings who attended college, these siblings often affected a student's decision to go to college. The encouragement of junior and senior high school teachers did not necessarily influence college decisions. Furthermore, it is important to note that neither gender differences nor SES differences played a significant role among either first-generation or non-first-generation college-bound students.

9.10 When Students First Consider Going to College

Non-first-generation students may make the decision to apply to college earlier than first-generation students because their parents are familiar with college life and also encourage them. In this study, 30% of non-first-generation students from high-SES backgrounds indicated that they first considered going to college while they were in the third year of junior high school, 20% while in elementary school, and 20% while in the first semester of their freshman year in high school. In the middle-SES group, 15% of first-generation students first considered going to college while they were in the third year of junior high school, and 15% while in elementary school. The majority of non-first-generation students from a middle-SES background indicated that they first considered going to college while they were in the third year of junior high school, and 20% while they were in elementary school. In the low-SES group, the majority of first-generation students first considered going to college in the third year of junior high school, and 15% while in the first semester of their freshman year in high school.

In the high- and middle-SES groups, many first-generation and non-first-generation students first considered a college education when they were in elementary school or in the third year of junior high school. In Japan, junior high school students in the third year have to decide whether to apply to a college-track high school or a vocational-track high school. This is why most college-bound students would first consider higher education in the third year of junior high school. From the data, it appears that first-generation students from low-SES backgrounds are likely to make college decisions slowly, compared with students in the high- and middle-SES groups. There was no causal relationship between the parent's education and the time students first considered a college education. Also, according to the data analysis, gender and SES differences were not significant factors.

9.11 Socioeconomic Status (SES) Differences in Reasons for Going to College

The influence of SES differences is one possible external factor affecting a student's decision to go to college (see Table 9). The data show that parents' encouragement was a factor across SES groups. There were no significant differences in the father's influence between SES groups. However, the mother's influence among first-generation students from low-SES backgrounds was slightly higher than in any other SES groups. Takeuchi and Fukuyama (1996) found that in Japan parents' college experience influences their children's college decision-making both directly and indirectly through parental involvement and investment in education. Parents with college degrees are more likely to invest in their children's education. Takeuchi (2003) also notes that if parents have less than a high school degree, their children are expected to earn an associate's degree or higher. The logical expectation would be that the children would earn only an associate's degree or lower, but what the results of the present study show that in Okinawa children of parents with no higher education tend to earn higher than an associate's degrees.

SES differences were also analyzed in relation to the influence of high school teachers. Except for non-first-generation students from high- and low-SES backgrounds, high school teachers were moderately influential in the college decision-making process of both first-generation and non-first-generation students. High school counselors were also moderately influential. Except for non-first-generation students from high and low-SES backgrounds, over 20% of students thought that their academic and career counseling teachers influenced their decision to go to college.

Looking at SES differences in peer and classmate influence, the rate of peer influence was very low among non-first-generation students from high-SES groups. In other groups, there were no significant SES differences in peer influence. However, the influence of classmates was much higher. First-generation students from low-SES backgrounds and non-first-generation students in the middle-SES group indicated classmate influence more than students in any other SES group.

The data indicate that most students wanted to go to college to expand their knowledge. Except for non-first-generation students from low-SES backgrounds, over 80% of both first-generation and non-first-generation students in the respective SES groups indicated that they wanted to expand their knowledge in college. This was most striking among non-first-generation students from high-SES backgrounds. Many non-first-generation students also indicated that they wanted to go to college in order to have free time to themselves. Many non-first-generation students cited various reasons for believing that college would give them more free time.

Table 9 Reasons to Go to College

Reasons to go to college	First-Generation College-Bound Student		Non-First-Generation College-Bound Student		
	Middle-SES “Agree” or “Somewhat Agree”	Low-SES “Agree” or “Somewhat Agree”	High SES “Agree” or “Somewhat Agree”	Middle-SES “Agree” or “Somewhat Agree”	Low SES “Agree” or “Somewhat Agree”
My father influenced my decision.	24%	28.2%	32.3%	32.6%	16.7%
My mother influenced my decision.	29.7%	42.3%	38.2%	37.2%	33.3%
My high school teachers influenced my decision.	31.5%	29.6%	17.6%	34.9%	16.7%
My academic and career counseling teachers influenced my decision.	25.9%	22.6%	14.7%	23.3%	16.7%
My peers influenced my decision.	11.1%	16.9%	8.8%	20.4%	16.7%
Most of my classmates planned to go to college.	24.1%	35.2%	26.5%	31.8%	16.7%
I wanted to live by myself.	16.7%	24%	23.5%	21.7%	33.4%
I wanted to expand my knowledge.	81.5%	81.7%	93.6%	87.4%	66.7%
I wanted my own free time.	27.8%	22.3%	44.1%	53.5%	50%
I wanted at least a B.A. degree in order to get a good job.	88.9%	88.8%	85.3%	88.4%	66.6%
I have always taken it for granted that I would go to college.	50%	47.2%	52.9%	51.9%	33.3%
I just had the desire to go to college.	35.2%	21.2%	29.4%	30.2%	0%

Students were also asked whether they decided to go to college because they “just had the desire” to do so. Both first-generation and non-first-generation students from low-SES backgrounds were less likely to indicate that this was the case. Regardless of SES differences, many college-bound students indicated a belief that it is important to have at least a Bachelor’s degree in order to get a good job, and that they wanted to go to college in order expand their knowledge through higher education.

The relationship between gender difference and SES difference in a student’s decision to go to college was also analyzed. There were some significant gender differences in relation to the father’s and mother’s influence. The father’s encouragement influenced male and female students differently. The rate of paternal influence in male first-generation students from middle- and low-SES backgrounds

was higher than among female first-generation students. Also, paternal influences were more common among male non-first-generation students from high-SES backgrounds than among female non-first-generation students. The same was true of maternal encouragement. The rate of maternal influence was much higher for males than for females among first-generation students from middle- and low-SES backgrounds as well as among non-first-generation students from high-SES backgrounds.

Another important finding was that regardless of SES differences, male students were likely to consider college because they wanted to live by themselves. In these cases, college may be seen as a way to get parental permission to move away from home. Only in the three reasons outlined above were there significant gender differences in college decision-making factors.

10 Conclusions

This study has considered how external and internal factors affect Okinawan first-generation students' college decision-making process. A quantitative study was conducted with one hundred forty-eight first-generation students who indicated what external and internal factors influenced their college decision-making. Two hundred five non-first-generation students also responded to the survey. In spite of financial disadvantages, many first-generation students from low-SES backgrounds were likely to apply to college. Gender was also not a significant factor among first-generation low-SES students in this study. On the other hand, the findings indicate a positive relationship in middle-SES families between socioeconomic factors and parental involvement.

The findings also reveal that especially low-SES students do not themselves consider SES significant, and they do not consider the financial limitations associated with their own SES group when applying to college. Forty percent of first-generation students from low-SES families are likely to apply to high-cost private colleges within Okinawa, and thirty percent to the public University of the Ryukyus in Okinawa. An additional twenty percent of low-SES first-generation students are likely to apply to high-cost private colleges outside of Okinawa. This demonstrates that the cost of tuition is not necessarily significant with regard to their college selection process. Most first-generation students from low- and middle-SES families also indicated that they would rely on their parents' support to cover their first-year's college expenses.

Regional and cultural factors must also be taken into consideration with respect to their influence on college decision-making and college selection among first-generation students. Okinawan students receive traditional cultural values from their parents and their local communities, and most first-generation and non-first-generation students expressed a strong sense of Okinawan identity in this study. They planned to apply to Okinawan colleges and seek employment within Okinawa after college because they were very proud to have grown up in Okinawa and hoped to remain there. Considering these factors in college decision-making, it is clear that first-generation students in Okinawa are influenced by a number of external and internal factors in their everyday life.

11 Limitations

More research is needed to understand the characteristics of first-generation students and their parents. In this study there were two main limitations. The first is related to the target population. There are forty-

one academic-track high schools in Okinawa, but the questionnaire was circulated at only five of these high schools. A total of five hundred forty-three high school seniors from the five schools responded to this survey, but only four hundred twenty were college-bound students. If there had been participation in this study by more students from successful academic-track high schools with greater than two-thirds college placement rates, as well as from lower academic-track high schools with only fifty-percent college placement rates, a large amount of data on the characteristics of first-generation students in Okinawa could have been collected and shared. Under the circumstances, it would be difficult to generalize the results of this study.

The second limitation of this study is that the survey was conducted while students were in the second semester of their senior year in high school, and it was difficult at that point to examine whether these first-generation college-bound students were admitted by their chosen universities and colleges to become first-generation college students. A longitudinal study is needed to explore what type of college these first-generation students actually decided to attend, within or outside of Okinawa, and what kind of employment they would seek after college. However, because of Japan's personal information protection law, it was impossible to ask for information such as student's home address or e-mail address in order to conduct longitudinal research following the completion of students' high school degrees.

12 Implications

The patterns of high school students who advance to college should be important indicators for the Okinawan government and local high schools as they seek to provide effective educational support programs to increase college advancement rates, particularly among students whose parents have less than a high school degree. The aforementioned data show that the characteristics of first-generation students whose parents have never enrolled in college differ from those of non-first-generation students. High school teachers should identify first-generation college students in order to support them in their college preparation during high school.

Furthermore, college awareness and preparation at an early stage would help first-generation students take steps to pursue higher education and would help increase the number of college-going students in Okinawa. The aforementioned findings indicate that the majority of students first considered going to college while in the third year of junior high school. This was true without regard to gender, SES or first-generation/non-first-generation status. The third year of junior high school is a very important time, because this is when junior high school students have

to choose whether to go to an academic-track high school leading to college or to a vocational high school leading directly to employment. College information and advice is needed for junior high school students, particularly students whose parents have never enrolled in college. With adequate information, parents could better help students understand the steps their children need to take during the three years of high school in order to apply to college. Students whose parents have earned a college degree have an advantage in this respect, because they benefit from their parents' knowledge in preparing for college admissions. Junior high schools in Okinawa should provide more related support, such as college preparation workshops to access college information, and junior high school teachers should also explain the differences between high school and college settings. Based on my findings, I believe longitudinal research is needed to determine how third-year junior high school students in Okinawa make decisions about attending college. This research should focus on early college awareness and college preparation programs, and the decision between an academic-track high school and a vocational high school.

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