COLLEGE CHOICE IN THE PHILIPPINES

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This descriptive and correlational study examined the applicability of major U.S. college choice factors to Philippine high school seniors. A sample of 226 students from a private school in Manila completed the College Choice Survey for High School Seniors. Cronbach's alpha for the survey composite index was 0.933. The purposes of this nonexperimental, quantitative study were (1) to describe the relative importance of major college choice factors (as identified in U.S. research) to Philippine high school seniors, and (2) to determine whether there were statistically significant differences in the importance ascribed to these factors, according to students' demographic attributes.

For all statistical analyses, SPSS 16.0 software was used. To address the first purpose, the mean and standard deviation were calculated for each college choice factor addressed in the survey. To address the second purpose, ANOVAs, Mann-Whitney *U* tests, and Kruskal-Wallis tests were run, in order to study the relationship between each of the major college choice factors and students' demographic attributes.

This study found that all of the major U.S. college choice factors were important, to some degree, in the Philippine context. Other factors were added based on pilot studies. This study also found that some of the U.S.-literature-generated demographic choice attributes functioned similarly in the Philippine setting (e.g. academic ability, gender), while others did not (e.g. educational level of fathers and of mothers). Moreover, students' academic ability was the primary demographic attribute, accounting for statistically significant differences in assessment of the importance of college choice factors for most (12 out of 13) of the factors.

The major U.S. college choice factors appear to be important to Philippine private high school students. Two choice attributes (academic ability, gender) appear to apply to private high school students in the Philippines, while the attributes of father's and mother's education levels do not appear to apply. Among Philippine private high school students, academic ability may account for differences in assessment of the importance of college choice factors. Using a survey method alone to study college choice is limiting. Future studies should utilize a variety of methods to collect data and should involve several schools.

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CHAPTER 1

INTRODUCTION

The crucial significance of the college choice decision to a person's life and future cannot be overstated (Canterbury, 1999, p. 26). According to Boyer (1987), "in choosing a college, one of life's major decisions is being made. A lot of time, money, and effort will be involved. The shape and quality of the student's life may rest on the outcome" (p. 287).

Research on college choice has provided additional insights in this area. Yet, as Liu (2005) and others have observed, "Most of the studies in college choice were conducted in the United States and other Western countries like Australia . . . and some European countries" (p. 18). The reality is that research on the college choice of students in the Philippines is limited. College choice research also has implications for the recruiting strategies of colleges/universities. Paulsen (1990) writes,

> The most important contribution of the micro-level studies of individual student enrollment behavior is their ability to estimate the effects of student characteristics, institutional characteristics, and their interactions on the probability that a student will choose a particular college or noncollege option. . . . Understanding the probable enrollment effects of institutional characteristics can help faculty and administrators develop the most appropriate marketing mix of attractive programs, delivered in appropriate places, at acceptable prices. (pp. 73-74)

Statement of the Problem

A major high school in the Philippines had recently launched into the higher education arena, by starting its own college. The aim was to recruit half of its college students from its high school base. As competition from area colleges/universities was stiff, administrators of the fledgling college needed an understanding of what their high school seniors were looking for in terms of higher education institutions. Unfortunately, research focused on the college choice of students in the Philippines was limited. A better understanding of how high school seniors evaluated the relative importance of major college choice factors would aid this college in recruiting students from its high school base.

Purposes of the Study

The first purpose of this study was to describe the relative importance of major college choice factors (as identified in United States research) to high school seniors in the Philippines, who were in the search and choice phases of their college selection process. The second purpose was to determine whether there were statistically significant differences in the relative importance ascribed to these major college choice factors (i.e. academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere), according to demographic attributes of the students (i.e. academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence).

Research Questions

The study sought answers to these research questions:

RQ1: How do high school seniors in the Philippines, in the search and choice phases of their college selection process, evaluate the relative importance of major college choice factors (as identified in United States research)?

RQ2: Do the relative importance ascribed to these major college choice factors (i.e. academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere) vary when the survey population was disaggregated by students' demographic attributes (i.e. academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence)?

RQ2.1: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

RQ2.2: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

RQ2.3: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' socioeconomic status?

RQ2.4: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' gender?

RQ2.5: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' educational aspirations/expectations?

RQ2.6: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' race/ethnicity?

RQ2.7: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' father's educational level?

RQ2.8: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' mother's educational level?

RQ2.9: Is there a statistically significant difference in the relative importance ascribed to the college choice factor of religious emphasis, when the survey population was disaggregated by students' religion?

RQ2.10: Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' friends/peer influence?

Significance of the Study

This study had significance for several areas. First, the results of this study were beneficial to students, their parents, and high school counselors and administrators in providing insights into the college selection process (Rowe, 2002, p. 14). Moreover, the findings "may provide a useful tool for self-discovery by providing a framework for assessing appropriate college choices" (Rowe, 2002, p. 14). Second, with the opening of its own college, AAA High School had launched into higher education. The natural clientele for the college were graduates of AAA High School. The institution (here referred to simply as AAA High School) was not identified by name, in order to facilitate objective critique of the findings. The results of this study should aid the college in recruiting students, as Paulsen (1990) explains,

> The most important contribution of the micro-level studies of individual student enrollment behavior is their ability to estimate the effects of student characteristics, institutional characteristics, and their interactions on the probability that a student will choose a particular college or non-college option. The enrollment effects of student attributes serve as guidelines for dividing students into groups possessing characteristics similar to those who most often enroll at a particular college. This enables institutions to identify the student markets with the greatest potential enrollment yield for a particular college or university.
>
> Understanding the probable enrollment effects of institutional characteristics can help faculty and administrators develop the most appropriate marketing mix of attractive programs, delivered in appropriate places, at

acceptable prices. The probable enrollment effects of interactions between student and institutional characteristics provide guidelines to help administrators effectively tailor and target their college's marketing mix of institutional attributes according to student characteristics in high enrollment yield markets. (pp. 73-74)

Third, this study contributed to scholarship on college choice in the Philippines, an area in which little research had been done. Finally, this investigation provided some insight into the extent to which United States college choice research related to the Philippine context.

Definition of Terms

Academic ability: In operationalizing this concept, this study considered two student factors: overall high school grade average and class section (honors vs. non-honors).

Academic quality: In operationalizing this concept, this study considered the student's value judgment of the institution based on his/her perception of the school's quality of professors, good academic reputation, quality of major(s) and courses he/she is interested in, quality of learning resources and facilities (library, computers, laboratories, etc.), interaction between students and professors, and focus on undergraduate education.

Choice: The third phase of the Hossler and Gallagher (1987) model, this is the stage when students decide which university or college they will attend, after evaluating the institutions in their choice set (p. 209).

Choice set: This is the short list of schools to which students will actually apply (Hossler & Gallagher, 1987, p. 209).

College choice: This is “a complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a decision to attend a specific college, university or institution of advanced vocational training” (Hossler, Braxton, & Coopersmith, 1989, p. 234)

College marketing: In operationalizing this concept, this study considered the student’s rating of the importance of the following information sources in his/her selection of a college: visits by college admissions officers to the high school, college literature (catalogs, flyers, brochures, etc.), college website, college DVDs/CD-ROMs/videos, campus visit, contact with college professors, contact with college alumni, and contact with college students.

Combined models of college choice: These models incorporate facets of the economic and sociological models, and may provide more explanatory power than any single perspective (Hossler, Schmit, & Vesper, 1999, p. 144).

Cost and financial aid: In operationalizing this concept, this study considered the student’s rating of the importance of the following in his/her selection of a college: costs, room and board expenses, availability of scholarships/financial aid, availability of internship/co-op opportunities, and availability of loans.

Econometric models of college choice: The fundamental notion underlying these models is that students maximize a utility (e.g., high quality, low cost), often using cost-benefit analysis (Hossler et al., 1999, p. 142).

Educational aspirations/expectations: In operationalizing this concept, this study considered the highest academic degree the student plans to attain in his/her lifetime.

Father's educational level: In operationalizing this concept, this study considered the highest level of education achieved by the student's father/male guardian.

Friends/peer influence: In operationalizing this concept, this study considered the student's perception of the importance of his/her friends' opinions in his/her college selection. This study also looked into how many of the student's close friends were planning to attend college.

Information-processing models of college choice: Another perspective from which to examine the college selection process (especially the search stage), these models see through a lens that "makes gathering and processing information in a social setting an essential part of decision making rather than a prerequisite to it" (Hossler et al., 1999, pp. 150-151).

Location: In operationalizing this concept, this study considered the student's rating of the importance of the following in his/her selection of a college: convenient driving distance from home and quality of campus residence halls.

Mother's educational level: In operationalizing this concept, this study considered the highest level of education achieved by the student's mother/female guardian.

Parent: This is a "father or mother or an individual serving as a mentor or guide for a dependent child" (Thomas, 2003, p. 16). This study explored "the influence that parents (or guardians) have on their child's decision to attend one institution rather than another" (Rowe, 2002, p. 10).

Predisposition: The first phase of the Hossler and Gallagher (1987) model, this is “a developmental phase in which students determine whether or not they would like to continue their education beyond high school” (p. 209).

Programs of study: In operationalizing this concept, this study considered the student’s rating of the importance of the following in his/her selection of a college: variety of majors and courses, and whether the institution offers the major(s) and courses that he/she wanted.

Religious emphasis: In operationalizing this concept, this study considered the student’s rating of the importance of a Christian environment in his/her selection of a college.

Search: The second phase of the Hossler and Gallagher (1987) model, this is the stage when students who want to continue their education, gather information about colleges or universities; the outcome is the student’s “choice set” (p. 209).

Social atmosphere: In operationalizing this concept, this study considered the student’s rating of the importance of the following in his/her selection of a college: variety of extracurricular activities (clubs, music, theater, etc.), quality of social life/activities, opportunity to be with his/her friends, and opportunity to interact with students from different backgrounds.

Socioeconomic status: In operationalizing this concept, this study considered the approximate annual income of the student’s parents/guardians.

Status-attainment (or sociological) models of college choice: These models emphasize “how socialization processes, family conditions, interactions with peers, and

school environments help shape students' college choices" (Hossler et al., 1999, p. 144).

Definition of Terms (Relating to Philippine Higher Education)

Baccalaureate: These "generally require four to five years of study. The Bachelor of Arts (AB) and Bachelor of Science (BS) are the most common baccalaureates, and both include general education courses, a major and electives"; these programs usually require at least 180 credits (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

CHED supervised institution: This refers to a "non-chartered public post-secondary education institution established by law, administered, supervised and financially supported by the government" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Local university and college: This refers to a "public higher education institution established by the local government through an appropriate resolution/ordinance and financially supported by the local government concerned" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Other government school: This refers to "any public secondary or post-secondary education institution that offers higher education programs" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Pre-baccalaureate: This refers to "college or university parallel programs that are similar to the first two years of a 4-year college curriculum often referred to as a Transfer Degree. These programs generally require a minimum of 90 credits" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Private non-sectarian: This refers to "any private higher education institution duly incorporated, owned and operated by private entities, which are not affiliated to any religious organization" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Private sectarian: This refers to "any private higher education institution, usually non-stock, non-profit, duly incorporated, owned and operated by a religious organization" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Sector: This "refers to Public or Private sector" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

State university/college: This is "a chartered public higher education institution established by law, administered, and financially subsidized by the government" (*Higher Education Statistical Bulletin: Definition of Terms*, 2006).

Limitations

First, as the demographics of AAA High School's students did not mirror that of the nation (e.g. race/ethnicity, socioeconomic status, attendance at a school that is both Evangelical and strong in math and science), the generalizability of this study's results to the entire population of high school seniors in the Philippines was severely limited. Second, by its very nature, a survey or questionnaire "cannot probe deeply into respondents' beliefs, attitudes, and inner experience" (Gall, Gall, & Borg, 2003, p. 222). The researcher could not follow up on a response to get more information. Third, a potentially major threat to the internal validity of this study was the influence of experimenter bias, defined as "researchers' expectations about the outcomes of their experiments that are unintentionally transmitted to participants so that their subsequent behavior is affected" (Gall et al., 2003, pp. 379-380). The survey was administered by

various school representatives, including teachers, counselors, and administrators. Fourth, the credibility of self-reported data was threatened by the presence of social desirability bias, that is, “the desire to edit a response before communicating it to a researcher, in order to make the responder look good” (Gonyea, 2005, p. 82). However, in paper survey administration, the size of this effect is usually small (Gonyea, 2005, p. 82). Moreover, the assurance of confidentiality and anonymity should have helped to mitigate the effect of this bias. Finally, since the respondents of the initial pilot study were seniors from one class of AAA High School, there was a possibility that they may have influenced their schoolmates from other classes, who took the survey later.

Delimitations

First, although the three phases of the Hossler and Gallagher (1987) model—predisposition, search, choice—provided the organizing framework for the research results referred to in Chapter 2, testing the entire Hossler and Gallagher model was not within the purview of this dissertation. Second, this study did not investigate the initial stage of college choice (predisposition), but focused on the latter phases—search and choice. Third, students who were absent from school on the day the survey was administered, or who were not able to submit the consent/assent forms on time, were not able to take the survey.

Assumptions

An underlying assumption was that students responded honestly and accurately when completing the survey. Another assumption related to the applicability of the college choice factors (as surfaced in United States research) to the Philippine situation.

CHAPTER 2

LITERATURE REVIEW

Introduction

In this chapter, literature pertaining to the college choice of students is reviewed. Proposed models of college choice, as well as influential factors, are addressed. As Liu (2005) and others have observed, “Most of the studies in college choice were conducted in the United States and other Western countries like Australia . . . and some European countries” (p. 18). Although some college choice research has been done in countries such as the United Kingdom (e.g., Anderson, 1999; Brooks, 2005; Dawes & Brown, 2002; Dawes & Brown, 2004; Hemsley-Brown, 1999; Maringe, 2006; Pugsley, 2004; Smith, 2007), with regards to community colleges (e.g., Absher & Crawford, 1996; Bers & Galowich, 2002), and with a focus on adult students (e.g., Broekemier, 2002; Roszkowski & Reilly, 2005), the studies reviewed in this chapter were conducted in the United States, relate mainly to four-year colleges, and focus on traditional-age students. Research on the college choice of students in the Philippines is limited. This chapter is divided into five major sections: (1) proposed models of college choice, (2) factors influencing college choice, (3) Philippine higher education and college choice research, (4) logic for applying United States college choice research to the Philippine situation, and (5) a summary.

Proposed Models of College Choice

College choice is defined as “a complex, multistage process during which an individual develops aspirations to continue formal education beyond high school, followed later by a decision to attend a specific college, university or institution of

advanced vocational training" (Hossler, Braxton, & Coopersmith, 1989, p. 234). Since the 1970s, the subject of student college choice has been generating more attention. On the college and university level, there was increased competition for a decreasing number of traditional-age students, and research in student college choice was viewed as a means of creating better marketing strategies (Hossler & Gallagher, 1987, p. 207). On the state and federal level, interest in college choice was fueled by public policy issues related to student financial aid and student access (Hossler & Gallagher, 1987, p. 207).

Proposed models of college choice can be classified into four categories: (1) econometric models, (2) status-attainment models, (3) information-processing models, and (4) combined models (Hossler, Schmit, & Vesper, 1999, pp. 141-142). The combined models of Jackson (1982), Litten (1982), and Hossler and Gallagher (1987) have been widely used (Hossler et al., 1999, pp. 141-142). These will be briefly reviewed. Since little study has been done on student college choice in the Philippines, it is helpful for educational administrators to glean from the scholarly research of the United States, where investigation into this subject has spanned almost four decades.

Econometric Models of College Choice

The fundamental notion underlying econometric models of college choice is that students maximize a utility (e.g., high quality, low cost), often using cost-benefit analysis (Hossler et al., 1999, p. 142). These models make the assumption that, "as students consider colleges, they can detail the advantages and disadvantages of each, associate a utility or a value with the attributes of each, make reasonable assumptions about the

outcomes of one decision over another, and then choose more or less rationally in order to maximize benefits and reduce costs" (Hossler et al., 1999, p. 142).

Two main branches of econometric models of college choice exist. The first gives "equations explaining institutional, statewide, or national enrollments as a function of characteristics of the population of potential enrollees and of the set of existing schools" (Fuller, Manski, & Wise, 1983, p. 105). The second explains "the enrollment decision of an individual student as his revealed preference among the available schooling and work alternatives" (Fuller et al., 1983, p. 105).

The second branch, which puts the focus on the individual student rather than on institutions, may be further subdivided into two types of econometric models. One type centers on the student's choice between college and non-school alternatives, such as military service or the workforce (e.g., Manski & Wise, 1983; Fuller et al., 1983). Another type concentrates on the student's selection of a particular college from among several higher education alternatives (Liu, 2005, p. 22).

A major weakness of econometric models relates to the assumption that students possess perfect (or near-perfect) information and make rational decisions in order to maximize utilities; however, this is not always the reality (Hossler et al., 1999, p. 144). Moreover, econometric models fail to address how the college choice process is influenced by institutions (Espinoza, 2001, p. 23).

Status-Attainment Models of College Choice

Status-attainment (or sociological) models emphasize "how socialization processes, family conditions, interactions with peers, and school environments help shape students' college choices" (Hossler et al., 1999, p. 144). For example, Sewell &

Shah (1968) examined the relationships of socioeconomic status, intelligence, and parental encouragement to the higher education aspirations of students. Sewell, Haller, & Portes (1969) stressed the social psychological and social structural antecedents of educational and occupational attainment.

While econometric models assume that students make rational decisions, status-attainment models have more interaction between variables that measure the traits of individual students and variables that assess broad social constructs (Hossler et al., 1999, p. 144). Combined models have the distinct advantage in that "the researcher can choose variables from either domain and concentrate on the sociological aspect of college choice as a process while maintaining the decision-making perspective of economics" (Hossler et al., 1999, pp. 144-145).

Information-Processing Models of College Choice

Information-processing has been suggested as another perspective from which to examine the college selection process, especially the search stage (Hossler et al., 1999, p. 150). It is a lens that

> makes gathering and processing information in a social setting an essential part of decision making rather than a prerequisite to it. Taking this perspective means we must consider aspects of decision-making theory and sociology, especially social capital and socialization. Information processing, social capital, and cultural capital together allow us to introduce into the college-choice process dynamic roles for parents, peers, and schools. (Hossler et al., 1999, pp. 150-151)

Combined Models of College Choice

Combined models, which incorporate facets of the economic and sociological models, may provide more explanatory power than any single perspective (Hossler et al., 1999, p. 144).

Jackson's Three–Phase Model (1982)

Jackson's (1982) model involves three phases: preference, exclusion, and evaluation. During the preference phase, Jackson (1982) suggests that students' aspirations develop in line with sociological findings, with the three strongest correlates of high school students' aspirations being (in decreasing order of strength): academic achievement, context, and family background (pp. 239-240).

In the exclusion phase, Jackson utilizes economic theory to maintain that college decision-making is basically a process of excluding institutions (Hossler et al., 1999, p. 146). He asserts that "students' choice sets depend on their exclusion criteria, which in turn depend on their anticipated financial resources and their academic experience" (Jackson, 1982, p. 240). However, he diverges from econometric models in acknowledging that students neither possess perfect information nor make rational decisions. "[T]he limited evidence available suggests that accurate information about colleges is difficult to come by . . . and that students typically exclude from their choice set colleges they ought to evaluate" (Jackson, 1982, p. 240).

During the evaluation phase, students assess the remaining options in their choice set, perhaps implicitly "translat[ing] his or her preferences into a rating scheme, rat[ing] each option in the choice set, and select[ing] according to these ratings" (Jackson, 1982, p. 241). In this final phase, Jackson (1982) notes that

> college costs, job benefits, and (where there is variation within the choice set) location have the strongest effects, followed closely by the interactions of family background and academic experience with these variables. College attributes other than cost have relatively weak effects, as distinct from some of the same variables' stronger effects in the exclusion phase. (p. 241)

Rating the relative importance of the various factors in the general model of student college choice, Jackson (1982) concludes that family background, academic experience, location, and college costs have strong effects on student choice; information, college attributes, and job attributes have moderate effects; and social context has a weak effect (p. 241). Some have pointed out that the models of Jackson (1982) and Chapman (1984) place undue emphasis on the factors which influence outcome, while failing to address the actual process of college selection (Merranko, 2005, p. 19). Although Jackson's model might aid college administrators in putting together a general enrollment plan, this model does not deal with other variables found in other models (Merranko, 2005, p. 19).

Litten's Five-Phase Model (1982)

Litten (1982) suggested a five-phase process: college aspirations, decision to start process, information gathering, applications, and enrollment (p. 388). His model recognized a diversity of variables influencing the college selection process of students. These factors include background (race, income, socioeconomic status, parents' education, family culture, parents' personalities, religion, gender), personal attributes (academic ability, self-image, personal values, benefits sought, personality/lifestyle), high school attributes (social composition, quality), student's performance (class rank,

curriculum), environment (occupational structure, economic and cultural conditions), influences/media used (parents, counselors, peers, publications, college officials, other media), college characteristics (price, size, programs, ambience, control), college actions, and public policy in the form of financial aid (Litten, 1982, p. 388).

Hossler and Gallagher's Three-Phase Model (1987)

Drawing from previous research (Jackson, 1982; Litten, 1982; Alexander, 1978; Anderson, Bowman, and Tinto, 1972; Chapman, 1981), Hossler and Gallagher (1987) suggested a three-phase developmental college choice model, involving predisposition, search, and choice (see Figure 1). During each stage, both individual and organizational factors interact and result in various outcomes. Hossler and Gallagher's (1987) three-phase model takes into account, not only student traits, but also attributes of high schools and colleges, in the student's process of college selection (pp. 208-209).

Figure 1. Hossler & Gallager's Three Phase Model of College Choice (1987).

Model Dimensions	Influential Factors		Student Outcomes
	Individual Factors	Organizational Factors	
PREDISPOSITION *(Phase 1)*	♦ Student Characteristics ♦ Significant Others ♦ Educational Activities	♦ School Characteristics	a. College Options b. Other Options
SEARCH *(Phase 2)*	♦ Student Preliminary College Values ♦ Student Search Activities	♦ College & University Search Activities (search for students)	a. Choice Set b. Other Options
CHOICE *(Phase 3)*	♦ Choice Set	♦ College & University Courtship Activities	♦ Choice

While previous research on college choice studied how students' background attributes, achievements, and aspirations interacted with their expectations of college, the Hossler and Gallagher (1987) model also incorporated organizational factors, specifically student access to and the availability of higher education institutions (Hossler & Gallagher, 1987, p. 207). A shortcoming, however, is the model's failure to

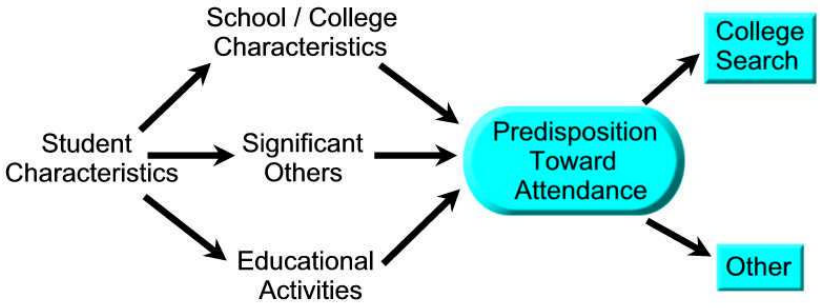
address how the organizational and individual student factors affect diverse student populations (Merranko, 2005, p. 25).

Southerland (2006) highlighted another weakness of the Hossler and Gallagher (1987) model, namely, that "almost all of the research upon which they build their model is based upon studies of traditional college-bound high school students" (p. 8). Indeed, today's student is "increasingly older, returning to school because of work-related issues, and attending on a part-time basis" (Broekemier, 2002, p. 32). As Hossler, Schmit, and Vesper (1999) observed,

> The model is primarily sociological. Background characteristics are correlated with the predisposition stage, the point at which students choose to go to college. These background characteristics are cumulative in terms of their effect upon the college-choice process, varying only in their level of influence during the several stages of the process they always operate. (p. 150)

Predisposition. The first phase (see Figure 2), labeled Predisposition, is "a developmental phase in which students determine whether or not they would like to continue their education beyond high school" (Hossler & Gallagher, 1987, p. 209). Predisposition should be distinguished from the idea of educational aspiration, in that aspiration stresses the intention, whereas predisposition emphasizes the decision to go to college (Hossler et al., 1999, p. 149).

Figure 2. Predisposition (Phase 1) (Adapted from Hossler & Gallager, 1987).



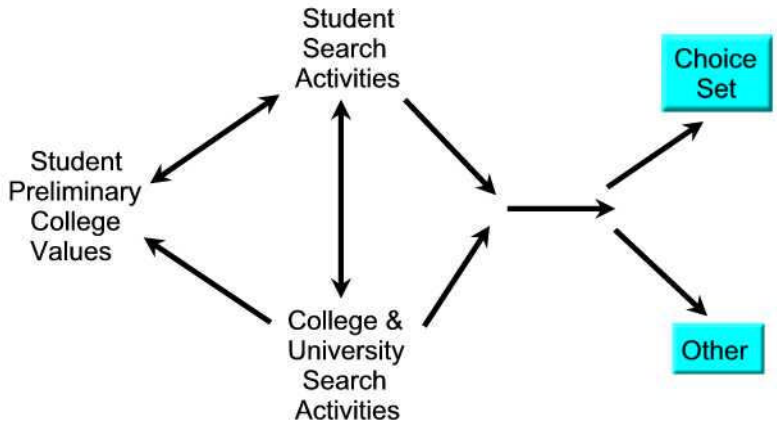
Among the three stages, the Predisposition phase has historically been the least researched (Hossler & Gallagher, 1987, p. 210). Nevertheless, Hossler and Gallagher (1987) identified some background attributes that seem to be positively correlated with attendance in college, and are cumulative in their effects on the college choice of students (p. 210). These include socioeconomic status, student ability, and the attitudes of parents and peers (Hossler & Gallagher, 1987, pp. 210-211).

Moreover, they described some organizational factors which interact with student factors to affect college choice. These include range of pre-college school experiences, and high school and college attributes (e.g., quality high school curricula, student proximity to campus, urban/suburban versus rural background of students) (Hossler & Gallagher, 1987, pp. 211-212). However, these organizational factors are not as strongly correlated to college attendance as are the background attributes previously mentioned (Hossler & Gallagher, 1987, p. 211).

Although the experiences molding predisposition are not well understood, it can be said that prospective college matriculants enter the search phase by some time in the early years of high school (Hossler & Gallagher, 1987, p. 212). According to Campaigne and Hossler (1998), “research also suggests that students have typically formulated their educational aspirations by the 9th or 10th grade” (p. 91).

Search. The second phase (see Figure 3), called Search, is the stage when students who want to continue their education, gather information about colleges or universities (Hossler & Gallagher, 1987, p. 209). The outcome is the student's "choice set," that is, the short list of schools to which they will actually apply (Hossler & Gallagher, 1987, p. 209). During the Search stage, there is increased interaction between students and higher education institutions; in other words, students are researching institutions at the same time that colleges and universities are looking for students (Hossler & Gallagher, 1987, p. 213). Moreover, students' social aspects (such as ability, socioeconomic status, and parental education) influence the quality of the searches conducted (Hossler & Gallagher, 1987, pp. 214-215).

Figure 3. Search (Phase 2) (Adapted from Hossler & Gallager, 1987).

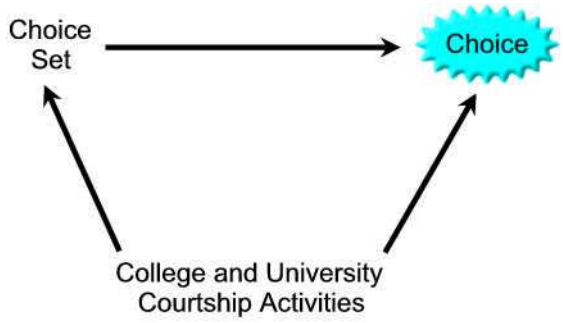


Contrary to econometric models, Hossler and Gallagher (1987) make no assumptions that students have perfect information or even that they make rational decisions. Rather, they acknowledge that students don't seem to use information in a completely rational manner, and posit that lack of accurate information regarding the true cost of attendance and financial aid may further this problem (Hossler & Gallagher,

1987, pp. 214-215). According to Cabrera and La Nasa (2000), “[t]his stage usually begins during tenth grade and ends by the middle of twelfth grade” (p. 9).

Choice. The third phase (see Figure 4), designated Choice, is when students decide which university or college they will attend, after evaluating the institutions in their choice set (Hossler & Gallagher, 1987, p. 209). Historically, a difficulty involved in researching this stage is the lack of accurate information on the number of applications that students submit (Hossler & Gallagher, 1987, p. 216).

Figure 4. Choice (Phase 3) (Adapted from Hossler & Gallager, 1987).



The students’ preferences (including perceptions of quality), institutional characteristics, financial aid, and college/university “courtship activities” (e.g., merit awards, non-aid based activities like personal letters from the president, on-campus banquet, etc.) seem to determine the results (Hossler & Gallagher, 1987, pp. 216-217). However, Hossler and Gallagher caution that

> the relationship between choice, quality, and price is sensitive to a number of variables and may not lend itself to easy generalizations. These findings indicate that aid and net cost have an impact on student matriculation, but that the impact may vary among types of institutions and students. (p. 217)

Hossler and Gallager (1987) Model as Research Organizing Framework

Each model has strengths and weaknesses in understanding the complex process of choosing a college. However, the Hossler and Gallagher (1987) model is considered by many to be the "prevailing model" (Teranishi, Ceja, Antonio, Allen, & McDonough, 2004, p. 531). As Teranishi, Ceja, Antonio, Allen, and McDonough (2004) note, "This model is particularly useful in considering the sequencing of factors that impact the decision-making process for students and parents and the role of school agents and external resources" (p. 531).

The Hossler and Gallagher (1987) model, with its three phases (predisposition, search, choice), provided the organizing framework for the research results referred to in this chapter (Braxton, 1990, p. 58). Research relating to various factors which influence the college selection process was examined to determine the approximate college choice phase—predisposition, search, or choice—in which the findings applied (Espinoza, 2001, pp. 25-26). However, testing the entire Hossler and Gallagher (1987) model was not within the purview of this dissertation.

Factors Influencing College Choice

A review of existing research yields several factors which influence the college choice process of high school seniors. Research findings relating to these factors are discussed subsequently in this chapter. The three phases of the Hossler and Gallagher (1987) model—predisposition, search, choice—provide the organizing framework for the research findings. Although this list is not exhaustive, the author contends that it includes the most outstanding and relevant college choice factors, as surfaced by previous studies. These factors, divided into four categories, are (1) *Student*

Characteristics: academic ability, socioeconomic status, race/ethnicity, high school environment, educational aspirations/expectations, gender; (2) *Institutional Characteristics*: academic quality, programs of study, cost and financial aid, location, social atmosphere, future job opportunities, religious emphasis; (3) *Significant Others*: parents, guidance counselors, friends; and (4) *College/University Search Activities*: college marketing.

The amount of attention given to various college choice factors has been uneven. For instance, much research has been devoted to the financial aid factor, while relatively little attention has been given to the factor of religious emphasis. Moreover, although this literature review includes the findings of research which span several decades, there seems to be a continuity in the factors considered during the college selection process. As Kinzie, Palmer, Hayek, Hossler, Jacob, and Cummings (2004) observed,

> The factors influencing students' college choice in the 1990s remained much the same as those identified in the 1960s by Holly and Richards (1965). They found that four main factors influenced students' college choice: intellectual emphasis, practicality, advice of others and social emphasis. Practicality included items such as "closeness to home" and "low cost," while items related to social climate and cocurricular life fit the social emphasis factor. Hossler, Schmit and Vesper (1999) found similar influences for students, but they asserted that either parents, other family members, or, to a lesser extent, peers, had the greatest influence on students' decisions. These findings are consistent with research dating back to the 1930s and 1940s. (p. 36)

Student Characteristics

Academic Ability

Student ability is a factor that influences the predisposition, search, and choice stages of the college choice process (Cabrera & Nasa, 2000, p. 6).

Predisposition. Paulsen (1990), after reviewing previous research (Conklin and Dailey, 1981; Tuttle, 1981; Carpenter and Fleishman, 1987; Davies and Kandel, 1981), concluded that a person is more likely to desire to attend college "when student academic aptitude is greater" and "when student academic achievement is greater" (pp. 37-38). Hossler and Gallagher's (1987) research concurred along the same lines (p. 210). The degree of parental encouragement seems to be moderated by students' academic ability, as occupational attainment research suggests that parents give the most encouragement to their child with the highest academic ability (Cabrera & Nasa, 2000, p. 9).

Search. Paulsen's (1990) literature review yielded these five general relationships related to students' academic ability: When student academic aptitude and achievement are greater, he/she is more likely to apply to, or attend, (1) a more highly selective institution, (2) a high-cost institution, (3) an institution located a greater distance from home, (4) a private institution rather than a public institution, and (5) a four-year institution (pp. 55-58). However, according to McDonough (1997), "African Americans, women, and low-SES students are especially likely to attend less-selective institutions, even if their ability and achievements are high" (pp. 4-5).

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas,

Briggs, and Rhee (1997) found that, “as we might expect, measures of ability play a significant role in determining the number of college applications a student submits. Students with higher SAT scores are likely to submit more applications across most racial/ethnic groups” (p. 57).

Some research indicate that “[s]tudents with higher aptitude begin thinking about college earlier, apply earlier, and consider a larger number of schools” (Paulsen, 1990, pp. 46-47). Studies also indicate that high ability students differ in their rankings of various college choice factors. According to Paulsen (1990),

> The higher the academic ability of a student, the greater the concern about academic standards, program offerings, and awareness of “net cost” rather than just “price,” and the lesser the concern about career outcomes, campus appearance, and financial matters . . . There is also some evidence that high ability students tend to have much broader geographic limits regarding the search and application process. (p. 50)

Choice. Harvard economists Christopher Avery and Caroline M. Hoxby’s (2004) article, entitled “Do and Should Financial Aid Packages Affect Students’ College Choices?”, has been called “the most precise examination yet on the impact of merit aid and aid package strategies on the enrollment patterns of students of high ability” (Mills, 2004, p. 28). Using data from the College Admissions Project, wherein researchers gathered data on 3,240 students from 396 United States high school and utilizing the conditional logit technique, Avery and Hoxby focused on how the college choice behaviors of high-ability students are affected by their financial aid packages (Cheng, 2006, p. 115). Avery and Hoxby (2004) concluded that

> high-aptitude students are nearly indifferent to a college's distance from their home, to whether it is in-state, and to whether it is public. However, they are sensitive to tuition, room, and board in the expected direction (lower is better). They also prefer to attend the most selective colleges in the set to which they are admitted. They are attracted by grants, loans, and work-study commitments. Although we find that students from different backgrounds do exhibit somewhat different college choice behavior, the differences are not dramatic and much college choice behavior is shared by the entire array of high-aptitude students. The main exceptions to this rule are students whose parents have high incomes or who themselves graduated from very selective colleges. Such students exhibit less sensitivity to variables that affect college costs. (p. 288)

Paulsen (1990) noticed that when tuition expenses, room and board costs, and distance from home increased, the college option became less attractive to students. However, "these effects are significantly greater for students at lower income levels and for those with lower aptitude. At higher levels of student income and aptitude, these effects become less important" (Paulsen, 1990, p. 27). Hossler (2000), reviewing several meta-analyses on the effects of financial aid on enrollment choices (Heller, 1997; Jackson, 1978; Leslie and Brinkman, 1987; St. John, 1990), observed that these reached similar conclusions,

> it typically requires larger scholarships to influence the enrollment decisions of high-ability students. These students are heavily recruited by many colleges and universities and are often offered many large scholarships. These students are

also more likely to be interested in institutions with higher levels of prestige and greater selectivity. (pp. 81-82)

Braxton (1990), reviewing previous studies (Chapman and Jackson, 1987; Litten and others, 1983; Keller and McKewon, 1984), concluded that although "[f]or academically able students, perceived quality is the most influential institutional characteristic in the choice stage," the awarded amount of financial aid "plays a significant role in the decisions of such students when their second- and third-choice institutions offer more aid than does their first choice" (pp. 61-62).

Socioeconomic Status

Socioeconomic status is a factor that influences the predisposition, search, and choice stages of the college choice process (Cabrera & Nasa, 2000, p. 6). According to the National Center for Education Statistics' *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, which describes a nationally representative sample of students who began their postsecondary education for the first time during the 2003-04 academic year,

> Thirty percent of dependent beginning postsecondary students at 4-year institutions came from families with annual incomes of $92,000 or more, compared with 17 percent of those at 2-year institutions and 4 percent of those at less-than-2-year institutions.
>
> About two-thirds (65 percent) of students who began at less-than-2-year institutions came from families in the lowest income group (less than $32,000). (Berkner, Choy, & Hunt-White, 2008, p. 34)

Predisposition. Paulsen (1990), referring to earlier studies (Stage and Hossler, 1989; Tutle, 1981), concluded that a person is more likely to want to attend college "when family income is higher" (p. 37). McDonough (1997) pinpoints some differences between low socioeconomic status, first-generation, college-bound students and high socioeconomic status students whose parents had finished college:

> Students who are first-generation college-bound begin to think about going to college much later than do students whose parents have gone to college, and those thoughts tend to be triggered by school personnel, specifically teachers and counselors . . . . Students who parents have attended college often get a head start on college preparations in elementary school by taking the right courses and maintaining good grades, and their families convey information to them about the different types of colleges and universities. Meanwhile, first-generation college-bound students do not get this information, oftentimes are not taking the right courses, and are struggling with the cultural conflicts between their new college-oriented world and the world of their friends, families, and communities. (p. 6)

Search and Choice. Paulsen (1990), after reviewing previous research, concluded that "[b]ased on characteristics of student background and ability alone, individuals are more likely to attend college" when "family income is higher" (p. 26). Furthermore, he found that when a student's family income is greater, he/she is more likely to apply to, or attend, a more highly selective institution, a high-cost institution, an institution located a greater distance from home, a private (rather than a public) institution, and a four-year institution (Paulsen, 1990, pp. 55-58). In a similar vein,

McDonough (1997) writes, “Independent of academic factors, upper-income youth are especially likely to enter America’s elite colleges . . . African Americans, women, and low-SES students are especially likely to attend less-selective institutions, even if their ability and achievements are high” (pp. 4-5).

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas, Briggs, and Rhee (1997) found that

> [a]nalyses by income groups also reveal that the majority of students in the lowest income category are either not likely to apply to college in the 12th grade (52%) or are likely to apply to very few schools. Although approximately 25% of students in the highest income category had not applied to college by the end of 12th grade, over half of these students apply to two or more schools and are more likely than students in other income categories to apply to five or more schools. In contrast, over half of the students in the lowest income category had not applied to college by the end of 12th grade. (pp. 54, 56)

Hurtado et al. (1997) concluded, “While results show that ability measures remain strong determinants of strategically planning students’ college options, socioeconomic characteristics continue to influence the choices or opportunities available to students in higher education in terms of the development of their college choice sets” (pp. 65-66).

Paulsen (1990) summarized his findings regarding the relation of costs and financial aid to socioeconomic status:

College becomes less attractive to students when tuition expenses, room and board expenses, and distance from home increase. However, these effects are significantly greater for students at lower income levels and for those with lower aptitude. At higher levels of student income and aptitude, these effects become less important . . . .

College becomes more attractive as the availability of financial aid increases, particularly scholarship aid. However, this effect is reduced for students at higher income levels because they have less chance of receiving financial aid. (pp. 27-28)

Using information from the College Admissions Project (which includes data on 3,240 students from 396 United States high schools), Avery and Hoxby (2004) focused on how the college choice behaviors of high-ability students are affected by their financial aid packages (Cheng, 2006, p. 115). Avery and Hoxby (2004) concluded that "[o]verall, we find that students from high-income families, whose parents attended more-selective colleges and who themselves attended private high schools, are less deterred by college costs and less attracted by aid" (p. 272).

Regarding loans, Campaigne and Hossler (1998), reviewing previous research (Hossler, Braxton, and Coopersmith, 1989; Newman, 1985; Paulsen, 1990), concluded that "low- and moderate-income students are very price sensitive and averse to tak[ing] out loans. Middle-income students, and their parents, on the other hand, are not hesitant to take out loans, indeed they often view loans as a good investment" (p. 94).

Some research indicates that student's preferred information sources may differ according to income; "[s]tudents at higher income levels . . . tend to depend more on

their parents for information, while lower-income students more often consult with high school counselors" (Paulsen, 1990, pp. 53-54). Cabrera and La Nasa (2000), citing earlier research (Flint, 1992, 1993; Hamrick and Hossler, 1996; Horn and Chen, 1998; Hossler, Schmit, and Vesper, 1999; Hossler, Schmit, and Bouse, 1991; Hossler and Vesper, 1993; Leslie, Johnson, and Carlson, 1997; McDonough, 1997; McDonough, Antonio, Walpole, and Perez, 1998; Miller, 1997; Olivas, 1985; Tierney, 1980), found that

> [i]n general, more affluent students, compared with their less-well-off peers, tend to rely on several sources of information (including private counselors to guide the process), are more knowledgeable of college costs, are more likely to broaden the search to include a wider geographical range, tend to consider higher-quality institutions, and have parents who planned and saved for college expenses. (p. 9)

Race/Ethnicity

According to the National Center for Education Statistics' *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, which describes a nationally representative sample of students who began their postsecondary education for the first time during the 2003-04 academic year,

> Overall, 62 percent of beginning postsecondary students in 2003–04 were White, 15 percent were Hispanic, 13 percent were Black, and 5 percent were Asian. The remaining students were American Indian (1 percent) and multiple or other races (4 percent) . . . .

> The racial/ethnic distribution of beginning postsecondary students varied by type of institution. At both public and private not-for-profit 4-year institutions, 70 percent were White, and at 2-year institutions, 60 percent were White. In contrast, at less-than-2-year institutions, 38 percent were White.
>
> Less-than-2-year institutions had proportionately more Black (22 percent) and Hispanic (33 percent) students than other institution levels. At 4-year institutions, 11 percent of beginning postsecondary students were Black, and 10 percent were Hispanic; at 2-year institutions, the corresponding proportions were 15 and 16 percent. (Berkner et al., 2008, pp. 33-34)

Perna (2007) points out that "[n]umerous sources demonstrate the lower educational attainment for African Americans and Hispanics" than whites (p. 52). Citing data from the National Educational Longitudinal Study of 1988 eighth graders (NELS:88), he observed that, by 2000, "eight years after most 1988 eighth graders graduated from high school—35 percent of whites had completed at least a bachelor's degree compared with only 17 percent of blacks and 15 percent of Hispanics" (Perna, 2007, p. 52). Citing data from the U.S. Department of Education's Common Core of Data and Integrated Postsecondary Education Data System, Perna (2007) observed that "the representation of blacks and Hispanics declines as the level of educational attainment increases" (p. 53).

Predisposition. Based on previous research, Paulsen (1990) concluded that a person is more likely to want to attend college "when the student is white" (p. 37). Moreover, he observed that

there appears to be an interesting interaction between race and the causal pattern by which college aspirations are formed. Variables which appear early in the causal sequence are useful for explaining the formation of college aspirations among whites, while blacks seem to rely more exclusively on variables which appear later in the causal sequence of aspiration formation.

. . . For example, Portes and Wilson (1976) found that while socioeconomic status factors and academic aptitude are related directly to the education aspirations of whites, they are unrelated to the educational aspirations of blacks.

College aspirations among blacks were related directly to academic achievement in school, the influence of significant others (parents, teachers, and friends), and self-esteem. Achievement and significant others' encouragement, but not self-esteem, were important in determining educational aspiration for whites. (Paulsen, 1990, pp. 43-44)

Since expectations to attend college are partially dependent on students' aptitude and preparation, Hurtado, Inkelas, Briggs, and Rhee (1997) used the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92) to investigate the "patterns of preparation for college and application behaviors for students who scored in the highest quartile of a four-subject cognitive test administered in the 8th grade" (p. 52). Their research revealed that

[t]he majority of 12th-grade Asian American students (85%), compared with other high-achieving students, have already taken required tests (particularly the SAT)

> or plan to take them soon. Similarly, the majority of African American (58%), Latino (68%), and white students (58%) who scored in the highest quartiles during 8th grade are likely to state they have already taken the SAT for college by the end of 12th grade. (Hurtado et al., 1997, p. 52)
>
> On the flip side, they noticed considerable talent loss.
>
> A fair proportion of the 12th grade, high-ability African Americans (20%) have either no plans to take the SAT or plan to take it later (20%). Unfortunately, this means that almost 40% of African Americans may be delaying their college entrance or foregoing college opportunities. It is also true that almost 40% of white and 32% of Latino students face similar situations. (Hurtado et al., 1997, p. 52)

Search. Paulsen (1990), after reviewing previous research (Jackson, 1988; Manski and Wise, 1983), concluded that "[b]ased on characteristics of student background and ability alone, individuals are more likely to attend college" when "they are white rather than nonwhite" (p. 26). According to McDonough (1997), "African Americans, women, and low-SES students are especially likely to attend less-selective institutions, even if their ability and achievements are high" (pp. 4-5). Some research indicates differences in the nature of the search phase by student's race; "[b]lacks request more information, consult more information sources, consider more institutions and more institutional characteristics than whites" (Paulsen, 1990, pp. 46-47).

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas, Briggs, and Rhee (1997) found that a large percentage of "African American (45%) and

Latino students (47%) do not even apply to college during the 12th grade, nor do approximately one-fifth to over one-quarter among these groups (respectively) who were identified as high achievers on 8th-grade cognitive tests" (p. 63). Perna (2000) observed that, according to previous research, "variables that predict college enrollment vary by race and ethnicity, suggesting that the college enrollment decision-making process is different for African Americans, Hispanics, and whites" (p. 72).

Choice. Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas, Briggs, and Rhee (1997) concluded,

> In many ways our analysis confirms prior research that shows Asian Americans are best prepared for college . . . and are likely to enter higher education immediately after high school. They are likely to have high expectations for degree attainment, take required standardized tests on time, and apply to the highest number of colleges. Despite Asian Americans' high application rates, however, they are not significantly more likely than white students to be attending their first choice institution. If students are aware of this fact, it only serves to reinforce the practice of applying to a wide range of schools. Among Asian American college applicants, student ability is the main predictor of being strategic about submitting college applications. This is in contrast to other groups where socioeconomic characteristics (parental income and education) continue to play a direct role in the development of a choice set. We suggest that such socioeconomic characteristics are more strongly tied with achievement among Asian Americans and therefore play an indirect role in the college choice

process. Rather than differentiating among college applicants, it may be that such socioeconomic characteristics play a direct role in determining which Asian American students do not attend college immediately after high school. (p. 64)

Status of Educational Research on Asian Pacific Americans. From the 2000 Census data, the U.S. Census Bureau reports, of the entire population of the United States, "11.9 million people, or 4.2 percent, reported they were Asian. This number included 10.2 million people, or 3.6 percent, who reported only Asian and 1.7 million people, or 0.6 percent, who reported Asian and at least one other race" (Reeves & Bennett, 2004, p. 1). Despite the fact that, "[i]n recent decades, the APA [Asian Pacific American] population has become the fastest-growing, college-going racial group in the nation," educational research on this group has not kept up (Teranishi et al., 2004, p. 529). Teranishi, Ceja, Antonio, Allen, and McDonough (2004) describe the current status of educational research on Asian Pacific Americans:

> Research on access and equity in higher education for different racial and ethnic populations frequently excludes Asian Pacific Americans (APAs) . . . from the discourse or misrepresents them. In general, research, policy, and political debates about college access have primarily focused on the educational attainment of African American and Latino students compared to White students without the consideration of APAs . . . When APAs are included in the debate over access and equity in higher education, there is a common assumption that APAs are a successful minority group, even 'outwhiting the Whites.' (pp. 527-528)

Asian Americans are “often presented as overrepresented in U.S. higher education, concentrated *only* in selective four-year universities, or a ‘successful’ minority group with no academic challenges” (Teranishi, 2007, p. 40). However, this perception does not accurately represent reality. According to the National Center for Education Statistics’ *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, “62 percent of beginning postsecondary students in 2003–04 were White, 15 percent were Hispanic, 13 percent were Black, and 5 percent were Asian. The remaining students were American Indian (1 percent) and multiple or other races (4 percent)” (Berkner et al., 2008, p. 33).

Moreover, as Teranishi (2007) points out, when researchers disaggregate total enrollment by institutional type, the large concentration of Asian Americans in community colleges is seen. “In 2000, there was a larger proportion of Asian American students attending public two-year institutions (44.4 percent) in the United States than four-year public institutions (43.2 percent)” (Teranishi, 2007, p. 41). Furthermore, as Teranishi et al. (2004) note, citing earlier research (Nakanishi, 1995; Ong, 2000; Sue and Okazaki, 1990; Takagi, 1992; Hune and Chan, 1997; Teranishi, 2002a),

> While there exists a limited amount of research on the educational experiences of Asian Americans as a whole, even less is known about the educational experiences of ethnic subgroups within the population . . . . Rather, the Asian American population has been misrepresented through being categorized and treated as a single, homogeneous racial group. (p. 528)

The contrasting reality is that “the Asian American population is quite diverse, with ethnic, social class, and immigrant subgroups that encounter differing social and

institutional experiences" (Teranishi, 2007, p. 42). This is indicated by the fact that 48 different Asian American and Pacific Islander categories made up the AAPI racial population of the U.S. Census Bureau in 2000 (Teranishi, 2007, p. 42).

Indeed, the idea that Asian Americans exceed other racial groups in educational attainment "masks wide differences . . . found within ethnic groups. For example, a large proportion of Hmongs (59.6 percent), Cambodians (53.3 percent), Laotians (49.6 percent), and Vietnamese (38.1 percent) adults over the age of twenty-five do not have a high school diploma" (Teranishi, 2007, pp. 43-44). As Endo (1990) explains, "Ideally, assessment data should be collected and reported for individual Asian groups. Unfortunately, most institutions and researchers collect or report only aggregated data" (p. 39).

Seminal Research of Teranishi, Ceja, Antonio, Allen, and McDonough (2004). Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the "postsecondary decisions, opportunities, and destinations of APA students from different ethnic and socioeconomic class backgrounds" (pp. 528, 532).

First, they investigated the distribution of Asian Pacific American subgroups across different types of institutions. They found that "Chinese and Korean Americans had greater representation in selective institutions, private institutions, and four-year universities than Filipinos and Southeast Asians. Filipinos, Japanese, and Southeast

Asians had their highest representation at public institutions with less stringent admission requirements" (Teranishi et al., 2004, p. 545).

Second, they studied how socioeconomic status affects the distribution of Asian Pacific American subgroups across different types of institutions. They found that

> [a]mong different ethnic groups, socioeconomic class impacted the destination of APA [Asian Pacific American] students at differential rates. For example, although Chinese Americans had the highest rates of attending private institutions, this finding holds only for high-SES Chinese students because low-SES [socioeconomic status] Chinese Americans had the lowest rates of enrollment in private institutions among all low-income students from other ethnic backgrounds. Inversely, the gap between socioeconomic class groups within some ethnic groups was very small in terms of their college destination. For example, Southeast Asians and Koreans showed almost equal rates of attending public universities for students from high- and low-SES backgrounds. (Teranishi et al., 2004, p. 545)

Third, they examined college-choice factors for different Asian Pacific American subgroups. They wrote,

> We determined that the college decision-making processes varied by the ethnic and socioeconomic class backgrounds of students. This general finding was true among such specific factors as the influence of social networks, the impact of cost and financial aid availability, numbers of college applications submitted, and perceptions of the prestige and reputation of different colleges. In the regression analyses, we found that these college-choice factors, after controlling for

> background characteristics and academic achievement, had differential effects on the selectivity of the college a student attended. Our findings suggest that APA students from different ethnic backgrounds were not always similar in their college-choice process nor were APA ethnic subpopulations similar in the factors that impacted their eventual college destinations. (Teranishi et al., 2004, p. 546)

High School Environment

High school academic resources is a factor that influences the predisposition and search stages of the college choice process (Cabrera & Nasa, 2000, p. 6). Research indicates that the high school environment "has an impact on the college choice process of all students, with the greatest impact on minority and low SES students" (Rowe, 2002, pp. 42-43). Attributes of the high school attended "is found to be positively related to college attendance, although it does not have as strong predicative strength of factors as SES, ability, or parental influence" (Liu, 2005, p. 40). Indeed, as Espinoza (2001) points out,

> Several studies have reported that rigorous high school curricula and college attendance are positively correlated . . . A small positive relationship has also been found . . . between college attendance and graduation from a high school with a rigorous curriculum in math, science, and other college preparatory subjects, even while holding student background characteristics constant. (pp. 39-40)

Predisposition. Paulsen (1990) concluded that a person is more likely to want to attend college "when a college preparatory curriculum is taken in high school" (p. 37). Using data from the National Educational Longitudinal Study of 1988 (NELS), which

started with surveying a nationally representative sample of 1988 eighth graders, with follow-up surveys in 1990, 1992, and 1994, research by Choy, Horn, Nuñez and Chen (2000) found that “[p]articipating in a rigorous mathematics curriculum significantly increases the likelihood of attending college” (pp. 46, 56). They reported that

> [t]aking algebra in eighth grade was strongly associated with taking advanced mathematics in high school, which, in turn, was strongly associated with a high likelihood of attending college. Taking advanced mathematics means taking at least one course beyond Algebra 2, such as Algebra 3, Trigonometry, Precalculus, Calculus, Probability, or Statistics. Overall, 22 percent of the 1992 high school graduates took algebra in eighth grade, and 39 percent took advanced mathematics in high school; however, 78 percent of those who took algebra in eighth grade later took advanced mathematics in high school . . . . Among those who took advanced mathematics in high school, about three-quarters (76 percent) enrolled in college by 1994 . . . . The enrollment rate dropped to 44 percent for those who took middle-level mathematics (Algebra 2), to 16 percent for those who took only algebra and geometry, and to 6 percent for those whose completion level was lower than algebra and geometry. These findings indicate that taking advanced mathematics courses in high school is an important intermediate step to college enrollment and that taking algebra in eighth grade is a critical first step. (Choy et al., 2000, pp. 56-57)

However, “[d]espite the strong association between mathematics course-taking and college attendance, parents’ education still mattered” (Choy et al., 2000, p. 57). They found that

> [h]igh school graduates whose parents had no college experience were less likely than their peers whose parents had graduated from college to participate in a mathematics curriculum leading to college enrollment. They were also less likely to have access to and be encouraged to follow such a curriculum and less likely to work with their parents in planning for college. This was true even for students who were the best prepared academically, where one would expect parents' education to make the least difference. (Choy et al., 2000, p. 56)

Search and Choice. Paulsen (1990), after reviewing previous research (Borus and Carpenter, 1984; Conklin and Dailey, 1981), concluded that "[b]ased on characteristics of student background and ability alone, individuals are more likely to attend college" when "a college preparatory curriculum is followed in high school" (p. 26). Furthermore, he found that when "the student followed a college preparatory curriculum in high school," he/she is more likely to apply to, or attend a more highly selective institution, and a high-cost institution (Paulsen, 1990, pp. 55-56).

Using information from the College Admissions Project (which includes data on 3,240 students from 396 United States high schools), Avery and Hoxby (2004) focused on how the college choice behaviors of high-ability students are affected by their financial aid packages (Cheng, 2006, p. 115). Avery and Hoxby (2004) concluded that "[o]verall, we find that students from high-income families, whose parents attended more-selective colleges and who themselves attended private high schools, are less deterred by college costs and less attracted by aid" (p. 272). However, they "failed to find significant differences in choice behavior along several other dimensions," including size of the high school (Avery & Hoxby, 2004, p. 272).

McDonough (1997) found that “[s]eniors enrolled in private high schools are significantly more likely than public school seniors to enter college and enroll in four-year institutions, even when track, ability levels, aspirations, and SES are controlled” (p. 7). He attributed this to the difference between private and public high schools, explaining that

> [o]n average, private schools are smaller, have different rules and expectations, and have larger percentages of students in the academic track than do public schools. Private schools also help students develop their college aspirations better than do public schools through a greater proportion of counselors per students, who encourage and influence a large proportion of their students in their college planning. (McDonough, 1997, p. 7)

Hossler and Gallagher (1987) observed,

> Several studies have noted that there is a positive relationship between the quality high school curricula and college matriculation (Hearn, 1984; Kolstad, 1979; Peters, 1977). Even though the relationship is weak, there is a positive correlation between college attendance and graduating from a high school which has a curriculum that includes more math, science, and other college prep courses. This relationship remains even when background characteristics are held constant (Kolstad, 1979). Alexander et al. (1978) have also found that students who graduate from high-status high schools are more likely to pursue higher education even when ability and SES are controlled. (p. 212)

Educational Aspirations/Expectations

Educational aspiration is an outcome of the initial *predisposition* stage, and a factor in the subsequent *search* and *choice* stages of the college choice process (Cabrera & Nasa, 2000, p. 6).

Predisposition. McDonough (1997) found that "[s]tudents' educational expectations play a major role in college placement . . . and oftentimes are the single strongest predictor of four-year college attendance" (p. 5). Moreover, "intending to go to college increases the likelihood of going by 21 percent when that intention develops prior to tenth grade, compared to plans formulated during the senior year" (McDonough, 1997, p. 5). Cabrera and La Nasa (2000) explain that "[d]evelopment and maintenance of postsecondary educational aspirations among high school students is proportionally related to the frequency and consistency with which parents provide encouragement" (p. 8).

Search and Choice. Paulsen (1990), after reviewing previous research, concludes that "[b]ased on characteristics of student background and ability alone, individuals are more likely to attend college" when "their own educational or occupational aspiration is higher" (p. 26). Furthermore, he found that when student educational aspirations are higher, he/she is more likely to apply to, or attend, a more highly selective institution, a high-cost institution, an institution located a greater distance from home, a private (rather than a public) institution, and a four-year institution (Paulsen, 1990, pp. 55-58).

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas,

Briggs, and Rhee (1997) found that although "the majority of students seek some type of postsecondary training," evidence points to "significant racial/ethnic differences in early predispositions for college" (p. 50). Hurtado et al. (1997) reported their results,

> At 10th grade, Asian Americans have the highest expectations for degree attainment (almost 42% expect to attend graduate school) and Latinos tend to have the lowest expectations for degree attainment among the four racial/ethnic groups. Approximately 11% of Latinos expect to only finish high school (or less) and 27% expect to attend graduate school. While approximately 10% of African Americans expect to finish high school or less (compared with 8% among white students), for the most part, their expectations for degree attainment are roughly similar with only a slightly higher percentage of white students expecting to complete a college or pursue graduate school. . . . By 12th grade, when all students have increased their aspirations, we find that these differences between black and white students have diminished somewhat ($p = \leq .05$). Asian Americans continue to report the highest expectations for a graduate education (47%) at 12th grade, with the next highest group being African Americans (35%), white students (32%), and Latinos remaining least likely to aspire to this level of attainment (31%). (p. 50)

Gender

According to the National Center for Education Statistics' *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, which describes a nationally representative sample of students who began their postsecondary education for the first time during the 2003-04 academic year,

> Women constituted a majority of beginning postsecondary students overall (57 percent), but the distribution of males and females varied by type of institution . . . . Women made up 56 percent of the beginning student population at both 2- and 4-year institutions, but they accounted for 73 percent at less-than-2-year institutions. (Berkner et al., 2008, p. 32)

Moreover, the report found that "[a] greater percentage of Black and Hispanic beginning postsecondary students (62 and 61 percent, respectively) were female than were White or Asian students (56 and 52 percent)" (Berkner et al., 2008, p. 33).

Search and Choice. Paulsen (1990), after reviewing previous research, found that when the student is male, he is more likely to apply to, or attend, a more highly selective institution, and an institution located a greater distance from home; when the student is female, she is more likely to apply to, or attend, a high-cost institution, and a private (rather than a public) institution (pp. 55-58). Conversely, Avery and Hoxby (2004) found that "[w]hile students' choice behavior is affected by variables like parents' income, parents' college selectivity, and private high school attendance, . . . [w]e tried and failed to find significant differences in choice behavior along several other dimensions: gender," etc. (p. 272).

According to Paulsen (1990), some research indicates that gender may play a role in the timing and nature of search and application, the importance rating of institutional characteristics, and the preferred information sources. First, "[w]omen start and finish the search and application process earlier, and make more applications than men" (Paulsen, 1990, pp. 46-47). Second, "while women tend to cite the most important characteristics . . . with relatively equal frequency, men are more likely to emphasize

programs or costs. Women also are more likely than men to rate residential life as important" (Paulsen, 1990, p. 48). Third, "[w]hile men and women utilize college catalogs and campus visits with similar frequency, women tend to seek the advice of college students more than men do, while men rely more on high school counselors than women do" (Paulsen, 1990, p. 53).

Mansfield and Warwick (2005) surveyed seniors from eight private, religiously affiliated schools from five states, evaluating the gender differences between students (as well as between parents) as to how they rate the level of importance of 19 college selection criteria, grouped into five categories: financial, social, psychological, physical, and functional. In the "financial" category, there was no significant difference between the importance level placed on "tuition costs" or on "scholarships" by male students and that placed by female students. However, female students placed a higher level of importance on the criterion of "financial aid" than did males (Mansfield & Warwick, 2005, p. 63). In the "physical" category, there was no significant difference between the importance level placed on "size of the school," on "location," or on "weather" by male students and that placed by female students. However, female students placed a higher level of importance on the criterion of "safety-security" than did males (Mansfield & Warwick, 2005, p. 65). In the "functional" category, there was no significant difference between the importance level placed on "quality of professors," or on "degrees offered by the school" by male students and that placed by female students. However, female students placed a higher level of importance on the criterion of "academics" than did males (Mansfield & Warwick, 2005, p. 67). In the "social" category, there was no significant difference between the importance level placed on "degree of cultural

diversity on campus," on "social activities," on "athletic programs," on "whether or not friends will attend," or on "prospects for marriage" by male students and that placed by female students. However, female students placed a higher level of importance on the criteria of "friendly atmosphere" and of "religious atmosphere" than did males (Mansfield & Warwick, 2005, pp. 67-68). In the "psychological" category, there was no significant difference between the importance level placed on "reputation of the school" or on "reputation of the degree obtained" by male students and that placed by female students (Mansfield & Warwick, 2005, p. 69). With regards to how both genders ranked the importance of each category, Mansfield and Warwick (2005) reported that "[b]oth male students and female students rate the characteristic groups in the same order, beginning with financial, then functional, psychological, physical, and social while overall means for each characteristic group are higher for the females than for the males" (p. 69). Moreover, for female students and parents, the most important criterion was academics; for male students, it was tuition (Mansfield & Warwick, 2005, p. 47).

Goss, Jubenville, and Orejan (2006) surveyed 229 freshman student-athletes from six institution in an effort to identify institutional selection factors most influential to them. They found that

> [w]hen examined separately, male and female small-college student-athletes showed similarity in their rankings of college choice factors, with the female subjects placing slightly more focus on academic rather than athletic factors. These results proved similar to those of Gabert et al. (1999), who noted that male and female student-athletes were influenced in their college selection factors in similar ways. (Goss, Jubenville, & Orejan, 2006, p. 123)

Institutional Characteristics

Academic Quality

Search. The academic quality of a college or university is an important factor considered by students during the *search* phase of the college choice process, as research has shown. Although different terms were used (e.g. academic reputation, faculty teaching reputation, academic standards, quality), Paulsen (1990), reviewing previous research (Litten and Brodigan, 1982; Murphy, 1981; Ihlandfeldt, 1980; Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975), found that academic quality is consistently highly ranked in terms of importance during the search phase of the college choice process (pp. 47-48). Similarly, Cabrera and La Nasa (2000), after examining other studies (Choy and Ottinger, 1998; Hossler, Schmit, and Vesper, 1999; McDonough, 1997; Tinto, 1993), concluded that the quality of an institution is a primary consideration shaping actual matriculation (pp. 9-10). Canale and Dunlap (1996) found that "teacher attributes, areas of study offered, costs and academic reputation were ranked the highest in terms of importance among the list of college characteristics investigated," after surveying 543 high school seniors and juniors in order to determine the relative importance of certain college traits in their choice of a prospective institution. In Litten and Brodigan's (1982) six-market study, three indicators of academic quality (academic reputation, teaching quality, academic standards) are included among the eight college attributes which *both* students and parents rated as most important (Paulsen, 1990, p. 50).

Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative

Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the "postsecondary decisions, opportunities, and destinations of APA students from different ethnic and socioeconomic class backgrounds" (pp. 528, 532). They found that among all Asian American subgroups, "more than half of all students indicated that the academic reputation of a campus was important in determining their choices. Chinese, Filipinos, and Koreans had slightly higher rates of indicating that rankings were important in their decisions" (Teranishi et al., 2004, p. 538).

Paulsen (1990) explained that "[h]ow selective an institution is in its admissions policy is a measure of quality for many students," and that "[o]n average, therefore, the attractiveness of college increases with this measure of quality" (p. 28). Some evidence indicate that academic quality is weighted differently among diverse groups of students. After reviewing previous research (Hearn, 1984; Rosenfeld and Hearn, 1982; Tierney, 1984; Zemsky, Shaman, and Berberich, 1980; Jackson, 1978; Zemsky and Oedel, 1983), Paulsen (1990) concluded that a person is "more likely to apply to, or attend, a more highly selective institution" when "the student is male," "the student is white," "students' parents have greater educational attainment," "student family income is greater," "student academic aptitude is greater," "student academic achievement is greater," "the student followed a college preparatory curriculum in high school," and "student educational aspirations are higher" (p. 55).

Hossler (2000), after reviewing several meta-analyses (Heller, 1997; Jackson, 1978; Leslie and Brinkman, 1987; St. John, 1990) concurred with Paulsen's observation, concluding that high-ability students are "more likely to be interested in

institutions with higher levels of prestige and greater selectivity" (Hossler, 2000, pp. 81-82). Similarly, Cabrera and La Nasa (2000), reviewing earlier studies (Flint, 1992, 1993; Hamrick and Hossler, 1996; Horn and Chen, 1998; Hossler, Schmit, and Vesper, 1999; Hossler, Schmit, and Bouse, 1991; Hossler and Vesper, 1993; Leslie, Johnson, and Carlson, 1997; McDonough, 1997; McDonough, Antonio, Walpole, and Perez, 1998; Miller, 1997; Olivas, 1985; Tierney, 1980), found that "[i]n general, more affluent students, compared with their less-well-off peers, . . . tend to consider higher-quality institutions" (p. 9). According to McDonough (1997), "African Americans, women, and low-SES students are especially likely to attend less-selective institutions, even if their ability and achievements are high" (pp. 4-5).

Choice. Research has consistently shown that the academic quality of an institution is an important consideration as students choose the institution of higher education to which they will matriculate. Paulsen (1990) listed "quality" among the top 10 "attributes which were found most often to determine where students decided to enroll," as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60). Likewise, Braxton (1990) included "general academic reputation or quality" among the characteristics students rated as important in their decision to apply to or attend a specific college or university (p. 60). McDonough's (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified reputation, prestige, and selectivity among the factors "consistently influential" in the search and choice phases of students' college choice process (p. 4).

Avery and Hoxby (2004), using data from the College Admissions Project (which includes information on 3,240 students from 396 United States high schools), found that, in general, “high-aptitude students . . . prefer to attend the most selective colleges in the set to which they are admitted” (p. 288). However, as Braxton (1990) noted, although “[f]or academically able students, perceived quality is the most influential institutional characteristic in the choice stage,” the awarded amount of financial aid “plays a significant role in the decisions of such students when their second- and third-choice institutions offer more aid than does their first choice” (pp. 61-62).

Braxton’s (1990) literature review found that students from high socioeconomic backgrounds (rather than from low or middle income levels), high-ability students, and students who receive much parental encouragement to attend college are more likely to attend selective colleges and universities (pp. 59-60).

Programs of Study

Search. The programs (or fields) of study available at a college or university is an important factor considered by students during the *search* phase of the college choice process, as research has shown. Although different terms were used (e.g. special academic programs, programs, educational programs, fields of study), Paulsen (1990), reviewing previous research (Litten and Brodigan, 1982; Ihlandfeldt, 1980; Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975), found that programs of study is consistently highly ranked in terms of importance during the search phase of the college choice process (pp. 47-48). Similarly, Cabrera and La Nasa (2000), after examining some research (Choy and Ottinger, 1998; Hossler, Schmit, and Vesper, 1999; McDonough, 1997; Tinto, 1993), concluded that availability of majors is a primary

consideration shaping actual matriculation (pp. 9-10). Likewise, Broekemier (2002) found that programs of study is “consistently rated [among the] important choice criteria for traditional-aged students” (p. 34).

In Litten and Brodigan’s (1982) six-market study, fields of study is included among the eight college attributes which *both* students and parents rated as most important (Paulsen, 1990, p. 50). Surveying 543 high school seniors and juniors in order to determine the relative importance of certain college traits in their choice of a prospective institution, Canale and Dunlap (1996) found that “teacher attributes, areas of study offered, costs and academic reputation were ranked the highest in terms of importance among the list of college characteristics investigated.”

Choice. Research has shown that the programs of study of a college or university is an important consideration as students choose the institution of higher education to which they will matriculate. Paulsen (1990) listed “programs” among the top 10 “attributes which were found most often to determine where students decided to enroll,” as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60). Likewise, Braxton (1990) included “special academic programs” among the characteristics students rated as important in their decision to apply to or attend a specific college or university (p. 60). McDonough’s (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified academic programs among the factors “consistently influential” in the search and choice phases of students’ college choice process (p. 4).

Cost and Financial Aid

Financial aid is one of the most researched issues in college choice. Much of the studies in this area "has examined issues of equity and adequacy in the computation of financial aid" (Liu, 2005, p. 41). This study concurs with Rowe (2002) in using the term "financial aid" to indicate "not only direct federal and state assistance such as the PELL grant, federally subsidized loans, [state tuition assistance] . . . but also scholarship awards and institutional grants based on student need" (pp. 51-52). According to the National Center for Education Statistics' *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, which describes a nationally representative sample of students who began their postsecondary education for the first time during the 2003-04 academic year,

> • Among all beginning students, 71 percent received some type of financial aid in 2003–04; the average amount of aid received was $7,500 . . . .
>
> • Sixty-two percent of the beginning students received an average of $4,600 in grants and 37 percent took out an average student loan of $4,300 in 2003-04. . . .
>
> • The average tuition and fees charged full-time/full-year beginning students in 2003–04 ranged from $2,000 at public 2-year institutions to $18,900 at private not-for-profit 4-year institutions . . . .
>
> • The average price of attendance (which includes room and board, books, and other expenses as well as tuition and fees) for full-time/full-year beginning students in 2003–04 ranged from $9,700 at public 2-year institutions to $28,600 at private not-for-profit 4-year institutions. (Berkner et al., 2008, pp. 145-146)

Predisposition. Referring to earlier studies (Miller, 1997; McDonough, 1997; Olson and Rosenfeld, 1984), Cabrera and La Nasa (2000) note that some evidence indicate that “knowledge of college costs and preparation to finance college education are more prevalent among upper-income parents” (pp. 8-9).

Search. During the search phase, potential matriculants develop parameters. Citing previous research (Gilmour and others, 1978; Tierney, 1983; Astin and others, 1980), Braxton (1990) writes, “Most students establish limits on geographical location and costs . . . . Once such limits are established, prospective students seek out institutions that offer programs they desire” (p. 59).

The cost of a college/university and the availability of financial aid are important factors considered by students during the *search* phase of the college choice process, as research has shown. Paulsen (1990), reviewing previous research (Litten and Brodigan, 1982; Murphy, 1981; Ihlandfeldt, 1980; Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975), found that cost (or financial) considerations is consistently highly ranked in terms of importance during the search phase of the college choice process (pp. 47-48). Similarly, Broekemier (2002), examining previous studies (Broekemier and Seshadri, 1998; Canale et al., 1996; Coccari and Javalgi, 1995), found that cost and financial aid/scholarships are “consistently rated [among the] important choice criteria for traditional-aged students” (p. 34). Likewise, Cabrera and La Nasa (2000), after reviewing other research (Choy and Ottinger, 1998; Hossler, Schmit, and Vesper, 1999; McDonough, 1997; Tinto, 1993), concluded that one’s ability to finance enrollment is a primary consideration shaping actual matriculation (pp. 9-10). In Litten and Brodigan’s (1982) six-market study, financial considerations is included among the

eight college attributes which *both* students and parents rated as most important (Paulsen, 1990, p. 50).

Canale and Dunlap (1996) found that “teacher attributes, areas of study offered, costs and academic reputation were ranked the highest in terms of importance among the list of college characteristics investigated,” after surveying 543 high school seniors and juniors in order to determine the relative importance of certain college traits in their choice of a prospective institution. Paulsen (1990) summarized his findings thus:

> *College becomes less attractive to students when tuition expenses, room and board expenses, and distance from home increase.* However, these effects are significantly greater for students at lower income levels and for those with lower aptitude. At higher levels of student income and aptitude, these effects become less important . . . .
>
> *College becomes more attractive as the availability of financial aid increases, particularly scholarship aid.* However, this effect is reduced for students at higher income levels because they have less chance of receiving financial aid. (pp. 27-28)

Some evidence indicate that financial considerations are weighted differently among diverse groups of students. Paulsen (1990), after reviewing previous research (Tierney, 1984; Hearn, 1984; Zemsky and Oedel, 1983; Jackson, 1978), concluded that a person is “more likely to apply to, or attend, a high-cost institution” when the “student is female,” the “students’ parents have greater educational attainment,” the “student’s family income is greater,” the “student’s academic aptitude is greater,” the “student

academic achievement is greater," the "student followed a college preparatory curriculum in high school," and "student educational aspirations are higher" (pp. 55-56).

Braxton (1990), reviewing previous studies, concluded that although "[f]or academically able students, perceived quality is the most influential institutional characteristic in the choice stage," the awarded amount of financial aid "plays a significant role in the decisions of such students when their second- and third-choice institutions offer more aid than does their first choice" (pp. 61-62). Moreover, "costs are more important than quality for academically talented students who are considering attending an in-state institution" (Braxton, 1990, p. 61).

Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the "postsecondary decisions, opportunities, and destinations of APA [Asian Pacific American] students from different ethnic and socioeconomic class backgrounds" (pp. 528, 532). They found that

> Southeast Asians and Filipinos, especially from the lowest income bracket, were more likely to indicate that they had major financial concerns about college than Chinese, Japanese, and Korean Americans. Filipinos (33.3%) and Southeast Asians (29.5%) were also most likely to choose a college because of low tuition, a trend that was true across all income levels for these ethnic groups. Filipino, Southeast Asians, and Koreans were most likely to select colleges based on the amount of financial aid that was offered to them. . . .

> Filipino Americans and Southeast Asian Americans from low SES backgrounds were most likely to indicate that they had major concerns about cost. However, students in the same groups but in the highest income brackets were also most likely to be concerned about cost. The groups with the largest gap between the high and low SES students were Chinese Americans and Korean Americans. Among low SES Filipino and Korean American students, low tuition was more important in their college destination than it was for low SES Chinese Americans and Southeast Asian Americans. Among the same groups, students from high SES backgrounds also had the highest rates of indicating that low tuition was important. For Chinese Americans and Southeast Asians, the cost of tuition presented the largest gaps between the high and low SES students, indicating a larger impact of socioeconomic class where the cost of tuition is concerned. (Teranishi et al., 2004, pp. 538, 540)

Regarding student and parental knowledge of financing a college education, Cabrera and La Nasa (2000) observed that "[i]n general, more affluent students, compared with their less-well-off peers, . . . are more knowledgeable of college costs, . . . and have parents who planned and saved for college expenses (p. 9).

Regarding loans, Campaigne and Hossler (1998), reviewing previous research (Hossler, Braxton and Coopersmith, 1989; Newman, 1985; Paulsen, 1990), concluded that "low- and moderate-income students are very price sensitive and averse to take out loans. Middle-income students, and their parents, on the other hand, are not hesitant to take out loans, indeed they often view loans as a good investment" (p. 94).

Investigating the effects of Federal Family Education Loans on the postsecondary education decisions of traditional-age, full-time students, Campaigne and Hossler (1998) found that these loans "seem to offer an added measure of flexibility in college destination choices for middle- and upper-income students, but this benefit appears to go hand in hand with a deleterious effect on the college choices of many lower-income and minority students" (p. 97).

Choice. Research has consistently shown that the cost and financial aid availability of a college/university is an important consideration as students choose the institution of higher education to which they will matriculate. Paulsen (1990) listed "cost" and "financial aid" among the top 10 "attributes which were found most often to determine where students decided to enroll," as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60). Likewise, Braxton (1990) included "tuition costs" and "availability of financial aid" among the characteristics students rated as important in their decision to apply to or attend a specific college or university (p. 60).

McDonough's (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified availability of financial aid among the factors "consistently influential" in the search and choice phases of students' college choice process (p. 4). Moreover, he found that "student aid has been found to result in (1) increased consumption of higher education and (2) redistribution of students to private, four-year, and smaller institutions" (McDonough, 1997, p. 4).

Cabrera and La Nasa (2000), in their extensive review of previous research, found that "[r]esearch consistently shows a significant and negative relationship between tuition increases and enrollment, an empirical relationship that conforms to public perceptions," that "[l]ow-income students' decisions to attend college appear to be highly sensitive to tuition and financial aid levels," and that "[a]lthough low-income students can be adversely affected by tuition increases, financial aid can positively predispose them to attend college" (pp. 12-13).

Hossler (2000), reviewing several meta-analyses on the effects of financial aid on enrollment choices (Heller, 1997; Jackson, 1978; Leslie and Brinkman, 1987; St. John, 1990), observed that these reached similar conclusions,

> [I]t typically requires larger scholarships to influence the enrollment decisions of high-ability students. These students are heavily recruited by many colleges and universities and are often offered many large scholarships. These students are also more likely to be interested in institutions with higher levels of prestige and greater selectivity. (pp. 81-82)

Harvard economists Christopher Avery and Caroline M. Hoxby's article, entitled "Do and Should Financial Aid Packages Affect Students' College Choices?", has been called "the most precise examination yet on the impact of merit aid and aid package strategies on the enrollment patterns of students of high ability" (Mills, 2004, p. 28). Using data from the College Admissions Project, wherein researchers gathered data on 3,240 students from 396 United States high schools and utilizing the conditional logit technique, Avery and Hoxby focused on how the college choice behaviors of high-ability

students are affected by their financial aid packages (Cheng, 2006, p. 115). Avery and Hoxby (2004) concluded that

> high-aptitude students . . . are sensitive to tuition, room, and board in the expected direction (lower is better). . . . They are attracted by grants, loans, and work-study commitments. . . . [However,] students whose parents have high incomes or who themselves graduated from very selective colleges . . . exhibit less sensitivity to variables that affect college costs.
>
> This being said, the students in our sample exhibit some hard-to-justify responses to aid that they are offered. They are excessively attracted by loans and work study, given the value of these types of aid compared to grants. They are attracted by superficial aspects of a grant, like its being called a scholarship (with a name) and its being front-loaded. They are far more sensitive to a grant's share of the college's comprehensive costs than they are to the amount of the grant. . . . We should note that these peculiar behaviors are generally not shared by the students whose parents have high incomes or who themselves attended very selective colleges. (pp. 288-289)

Location

Predisposition. Hossler and Gallager (1987) observed that "[s]tudents who live close to a campus are more likely to enroll in a college or university (and not necessarily the one they live close to). Along with proximity, high school students who live in urban and suburban areas are also more likely to go to college than are students from rural settings" (p. 212).

Search. The location of a college or university is an important factor considered by students during the *search* phase of the college choice process, as research has shown. Although different terms were used (e.g., location, distance, distance from home), Paulsen (1990), reviewing previous research (Litten and Brodigan, 1982; Murphy, 1981; Ihlandfeldt, 1980; Gilmour et al., 1978; Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975), found that location is consistently highly ranked in terms of importance during the search phase of the college choice process (pp. 47-48). In Litten and Brodigan's (1982) six-market study, location is included among the eight college attributes which both students and parents rated as most important (Paulsen, 1990, p. 50).

Citing previous research (Gilmour and others, 1978; Tierney, 1983; Astin and others, 1980), Braxton (1990) writes, "Most students establish limits on geographical location and costs . . . . Once such limits are established, prospective students seek out institutions that offer programs they desire" (p. 59). Paulsen (1990) found that "[i]n terms of institutional characteristics, the attractiveness of college in general, and the attractiveness of a particular college tend to increase" when "the distance from home to college is less" (p. 27). However, "[a]t higher levels of student income and aptitude, these effects become less important" (Paulsen, 1990, p. 27). Kinzie, Palmer, Hayek, Hossler, Jacob, and Cummings (2000) provide some insights into the benefits of choosing an institution close to home,

> [It] is a way for many students to alleviate some of the burden of higher education's cost . . . . By attending a college close to home, students have the option of living at home in order to avoid paying rent . . . . Additionally, attending

a local community or four-year college might ensure that a student can avoid other costs and changes, such as finding a new place of employment, moving, or making friends. (p. 38)

Some evidence indicate that location is weighted differently among diverse groups of students. Paulsen, after reviewing previous research (Rosenfeld and Hearn, 1982; Tierney, 1984; Gilmour et al., 1978; Ihlanfeldt, 1980; Zemsky, Shaman, and Berberich, 1980; Zemsky and Oedel, 1983), concluded that a person is "more likely to apply to and attend an institution located a greater distance from home" when the "student is male," the "student's parents have greater educational attainment," the "student family income is higher," the "student academic aptitude is higher," the "student academic achievement is higher," and the "student educational aspirations are higher" (p. 57).

Along similar lines, Cabrera and La Nasa (2000), citing earlier studies (Flint, 1992, 1993; Hamrick and Hossler, 1996; Horn and Chen, 1998; Hossler, Schmit, and Vesper, 1999; Hossler, Schmit, and Bouse, 1991; Hossler and Vesper, 1993; Leslie, Johnson, and Carlson, 1997; McDonough, 1997; McDonough, Antonio, Walpole, and Perez, 1998; Miller, 1997; Olivas, 1985; Tierney, 1980), found that "[i]n general, more affluent students, compared with their less-well-off peers, . . . are more likely to broaden the search to include a wider geographical range" (Cabrera & Nasa, 2000, p. 9).

Previously, Hossler and Gallagher (1987) had noted that "high-ability students tend to conduct more sophisticated searches"; citing Zemsky and Oedel (1983), they observed that "as the SAT scores and income level of potential matriculants fall, they narrow the geographical range and the quality of the institutions they consider" (Hossler

& Gallagher, 1987, p. 214). Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the "postsecondary decisions, opportunities, and destinations of APA students from different ethnic and socioeconomic class backgrounds" (pp. 528, 532). They identified

> socioeconomic class differences for the different ethnic subpopulations in the type of institutions they attended. . . . Southeast Asians and Filipinos from lower-income families were the most likely to choose a school near home. Interestingly, Southeast Asians and Filipinos in the highest income bracket were also most likely to indicate that living near home was very important. In addition, the gap between the high- and low-income Southeast Asians and Filipinos was fairly small compared to that of other ethnic groups. Thus, socioeconomic class was less a factor in living near home than ethnicity. (Teranishi et al., 2004, p. 540)

Choice. Research has shown that the location of an institution is an important consideration as students choose the institution of higher education to which they will matriculate. Paulsen listed "location" among the top 10 "attributes which were found most often to determine where students decided to enroll," as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60). Likewise, Braxton (1990) included "location or distance from home" among the characteristics students rated as important in their decision to apply to or attend a specific college or university (p. 60). Similarly,

McDonough's (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified location among the factors "consistently influential" in the search and choice phases of students' college choice process (p. 4).

Rowe (2002), referring to other studies (Tierney, 1983; Tierney, Houang and Henson, 1979; Litten and Brodigan, 1982), made a case for location as "critically important not only in the search phase but also in the final selection phase," and that location is an important factor "for all seniors, at all levels of ability, first generation, or having college educated parents, expecting to commut[e], or be a residential student" (p. 59). However, as Espinoza noted, "Although most studies list this as an important factor, rarely do students rate this as the most important factor driving their choice of a college campus" (pp. 66-67). Avery and Hoxby (2004), using data from the College Admissions Project (which includes data on 3,240 students from 396 United States high schools), found that, in general, "high-aptitude students are nearly indifferent to a college's distance from their home, to whether it is in-state, and to whether it is public" (p. 288).

Social Atmosphere

Search. The social atmosphere of a college or university is an important factor considered by students during the *search* phase of the college choice process, as research has shown. In Litten and Brodigan's (1982) six-market study, social atmosphere is included among the eight college attributes which both students and parents rated as most important during the search and application process (Paulsen, 1990, p. 50). Similarly, Cabrera and La Nasa (2000), after examining previous studies

(Choy and Ottinger, 1998; Hossler, Schmit, and Vesper, 1999; McDonough, 1997; Tinto, 1993), concluded that campus life is a primary consideration shaping actual matriculation (pp. 9-10).

Capraro, Patrick, and Wilson (2004) found, in surveying high school juniors, that "attractiveness of social life, defined in terms of characteristics of the people and experiences to be found at a school, is at least as important as quality of education in determining the likelihood of a candidate undertaking decision approach actions" toward an institution of higher education (p. 93). They reported that

> [t]he results suggest that after controlling for perceptions of quality of education, there is a positive relationship between attractiveness of social life at a school and likelihood to undertake decision approach actions (i.e., request information . . . visit . . . apply) toward that school. (Capraro et al., 2004, pp. 99-100)

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas, Briggs, and Rhee (1997) found that "the importance of the social atmosphere is positively associated with large choice sets among white students but is actually associated with smaller choice sets among African American students." They postulate that this "may be that few schools meet the social preference criteria among African Americans, presumably because of the varying racial climates on college campuses" (Hurtado et al., 1997, pp. 57, 60). Rowe (2002), after a limited literature review (Brown, 1991; Kealy and Rockel, 1987; Maguire and Lay, 1981; Carter, 1999), concluded, "All students appear to consider student body characteristics and social environment in the

choice process, but according to their own characteristics they may be looking for different institutional environments in the search for a comfortable fit" (p. 58).

Choice. Paulsen (1990) listed "social atmosphere" among the top 10 "attributes which were found most often to determine where students decided to enroll," as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60). Likewise, Braxton (1990) included "social atmosphere" among the characteristics students rated as important in their decision to apply to or attend a specific college or university (p. 60).

Future Job Opportunities

Predisposition. Based on previous research, Paulsen (1990) concluded that a person is more likely to want to attend college "when perceived economic benefits of college are high" (p. 37).

Search. The job placement rate of a college or university is a factor considered by students during the *search* phase of the college choice process, as research has shown.

In Litten and Brodigan's (1982) six-market study, careers available is included among the eight college attributes which both students and parents rated as most important during the search and application process (Paulsen, 1990, p. 50). Broekemier (2002) found that job placement after graduation is "rated [among the] important choice criteria for traditional-aged students" (p. 34). Likewise, citing earlier studies (Moore and Elmer, 1992; Sanders, 1990; Swensen, 1998; Winston, 1999), Espinoza (2001) found

that “[s]tudents . . . report an interest in the job placement rate of program graduates” (p. 53).

Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the “postsecondary decisions, opportunities, and destinations of APA students from different ethnic and socioeconomic class backgrounds” (pp. 528, 532). They found that among all Asian American subgroups, “students felt that being able to get a good job or going to a good graduate program were also important to consider when selecting a college” (Teranishi et al., 2004, p. 538).

Choice. Paulsen (1990) listed “jobs available” among the top 10 “attributes which were found most often to determine where students decided to enroll,” as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60).

Religious Emphasis

Choice. Referring to previous studies (Kuntz, 1987; Maguire and Lay, 1981), Paulsen (1990) listed “religious emphasis” among the top 10 “attributes which were found most often to determine where students decided to enroll,” as he summarized representative research related to college traits which distinguished between matriculation and nonmatriculation at specific institutions during the final choice phase of the college choice process (p. 60).

However, a review of the literature by this researcher has *not* found religious emphasis to be a major college choice factor studied. Nevertheless, there are some research along these lines. Preferences regarding the religious emphasis of colleges/universities may be more relevant for students from families with strong religious beliefs, as well as for students who are in denominationally-affiliated school settings. (Since the survey respondents for this study are from AAA High School, which is a religious institution, this factor will be included in the survey.)

Surveying freshmen and transfer students at a denominationally-affiliated college, Kellaris and Kellaris (1988) found that "religious orientation" was among the 11 enrollment decision factors mentioned by students (pp. 188, 190-191). Moss and Cockriel (1990) studied reasons for college selection, using the American College Testing Corporation's *ACT Alumni Survey* data, which was gathered from 172 universities and colleges in 42 states, with over 77,000 alumni respondents (p. 4). They concluded,

> Our data clearly show that individuals do not choose to attend religious and public colleges for the same reasons. Alumni from religious colleges revealed that their parents, as well as the college's social atmosphere, were more influential in their choice of a college than did alumni of other types of schools. Our data also show that these differences cannot be attributed to variation between public and private schools alone nor to differences in schools size. (Moss & Cockriel, 1990, p. 10)

Referring to earlier studies (Kellaris and Kellaris, 1988; MacDermott, Conn, and Owen, 1985; Riesman, 1980; Tierney, 1988), Moss and Cockriel (1990) noted that this conclusion was consistent with previous research,

> As other researchers have found, compared to students who attend nonreligious institutions, students who attend church-related colleges do so more because of influences from parents and relatives . . . Christian parents influence their children either because they attended a particular Christian college or have ties to the sponsoring denomination . . . Many students are looking for a safe, moral atmosphere . . . or want to avoid secular, cosmopolitan institutions. (p. 8)

Saggio (2001) investigated the influence of family on institutional choice, as well as post-freshman persistence, of American Indian/Alaska Native students at American Indian College (Phoenix, AR), by conducting interviews of 29 students. He reports his findings,

> Family was found to have both a positive and negative influence on choosing a college . . . Positive influence of family towards choosing a college included encouragement to attend, encouragement by example, and encouragement to succeed. The negative influence of family towards choosing a college consisted of bias against Bible colleges. (Saggio, 2001, p. 4)

Ihlanfeldt (1980) explains how preference in the area of religion may affect college choice:

> Each year many students select colleges with strong denominational ties. The fact that a college has such an affiliation may be the main reason for choosing the college. More often, however, a combination of factors influences the

> decision. Denominational affiliation alone, without a history of academic credibility, is not likely to attract many students. Yet, a college that has maintained a reasonably distinguished academic reputation with strong denominational ties should be in a strong market position. For many families, the religious experience is as important as the academic experience, and for those families the two should not be separated. (p. 25)

Significant Others

Parents

Parental encouragement and support is a factor that influences the predisposition, search, and choice stages of the college choice process, while parental collegiate experiences and parental saving for college affect the predisposition stage (Cabrera & Nasa, 2000, p. 6). Referring to previous research (Cabrera and La Nasa, 2000a; Cabrera and La Nasa, 2000b; Choy, Horn, Nuñez, and Chen, 2000; Cabrera and La Nasa, 2001; Conklin and Dailey, 1981; Flint, 1992; Keller and McKewon, 1984; Hossler, 1999; Stage and Hossler, 1989), Bers and Galowich (2002) found that

> [r]esearch shows that parents of four-year college students often play important roles throughout the college choice process, both in terms of setting expectations for their children and taking the more proactive approach of discussing college plans and saving for college expenses. (p. 68)

However, as they also point out, some research (Hossler, 1999; Hossler, Braxton, and Coopersmith, 1989) indicate that “the parental role in college choice is greater during the earlier years of high school than later (i.e. when the disposition to attend college is formed)” (Bers & Galowich, 2002). Similarly, Hossler and Foley (1995)

noted that some evidence indicate that high school students depend heavily on “internal sources of information (parents and other family members) when they begin their college choice process (freshman and sophomore years), but then they turn increasingly to outside sources of information in their junior and senior years (peers, teachers, and counselors)” (p. 25).

Some evidence suggest that “millennials,” referring to students born from 1982 to the present, “are used to having their parents around, and many do not mind the consultation and involvement of Mom and Dad” (Vander Schee, 2006, p. 7). The label “helicopter parent” derives from “the behavior of parents who hover around their children while on campus, are in constant communication, and are very engaged in the lives of their kids” (Vander Schee, 2006, p. 7). Interestingly, “[t]he Avery and Hoxby study [2004] treats parents as co-partners in the college selection process, which echoes the finding of Howe and Strauss in *Millennials Go to College*, the 2003 follow-up to the landmark *Millennials Rising: The Next American Generation* [2000]” (Mills, 2004, p. 28).

According to the National Center for Education Statistics’ *Descriptive Summary of 2003-04 Beginning Postsecondary Students: Three Years Later*, which describes a nationally representative sample of students who began their postsecondary education for the first time during the 2003-04 academic year,

> Among all beginning postsecondary students, 36 percent had parents who had not gone beyond high school, 25 percent had at least one parent with some postsecondary education, and 39 percent had at least one parent with a bachelor’s degree . . . .

> The level of institution at which students first enrolled and parents' education were related. For example, 65 percent of those enrolling at less-than-2-year institutions had parents who had not gone beyond high school, compared with 43 percent of those starting at 2-year institutions and 23 percent of those starting at 4-year institutions. Conversely, 55 percent of students starting at the 4-year level had a parent with a bachelor's degree, compared with 28 percent of those at 2-year institutions and 15 percent of those at less-than-2-year institutions. (Berkner et al., 2008, p. 34)

Predisposition. Paulsen (1990), after reviewing previous research (Stage and Hossler, 1989; Davies and Kandel, 1981; Conklin and Dailey, 1981; Sewell and Shah, 1978; Spenner and Featherman, 1978), concluded that parental encouragement has consistently emerged as the most influential factor on the formation of students' college aspiration (pp. 40-42). Furthermore, citing earlier studies (Stage and Hossler, 1989; Tuttle, 1981; Conklin and Dailey, 1981; Carpenter and Fleishman, 1987; Davies and Kandel, 1981), Paulsen (1990) concluded that a person is more likely to want to attend college "when the parents' educational attainment is greater," "when the father's occupational status is higher," and "when parental encouragement is greater" (p. 37).

MacDermott, Conn, and Owen (1987), investigating the influence of parental educational level on college choice, found that students with college-educated parents "said that they naturally assumed they would attend college, while the first generation students indicated that it was discussed and seriously considered before a decision was made" (p. 7). Referring to previous studies (Flint, 1992, 1993; Henderson and Berla, 1994; Hossler and Vesper, 1993; Hossler, Schmit and Vesper, 1999; Miller, 1997;

Perna, 2000; Stage and Hossler, 1989), Cabrera and La Nasa (2000) distinguish between the two dimensions of parental encouragement. They write, “The first is motivation: parents maintain high educational expectations for their children. The second is proactive: parents become involved in school matters, discuss college plans with their children, and save for college” (p. 8). McDonough (1997) pinpoints some differences between low socioeconomic status, first-generation, college-bound students and high socioeconomic status students whose parents had finished college:

> Students who are first-generation college-bound begin to think about going to college much later than do students whose parents have gone to college, and those thoughts tend to be triggered by school personnel, specifically teachers and counselors . . . Students who parents have attended college often get a head start on college preparations in elementary school by taking the right courses and maintaining good grades, and their families convey information to them about the different types of colleges and universities. Meanwhile, first-generation college-bound students do not get this information, oftentimes are not taking the right courses, and are struggling with the cultural conflicts between their new college-oriented world and the world of their friends, families, and communities. (p. 6)

Furthermore, as Lange and Stone (2001) note,

> college-educated parents are more likely to start a college savings account for their children and engage in more frequent discussions about college with their children . . . By contrast, first-generation students report less family support for their college aspirations and often have less factual information about college. (pp. 22-23)

The degree of parental encouragement seems to be moderated by students' academic ability, as occupational attainment research suggests that parents give the most encouragement to their child with the highest academic ability (Cabrera & Nasa, 2000, p. 9).

Using data from the National Educational Longitudinal Study of 1988 (NELS), which started with surveying a nationally representative sample of 1988 eighth graders, with follow-up surveys in 1990, 1992, and 1994, research by Choy, Horn, Nuñez and Chen (2000) suggest that "parents, peers, and school personnel can all contribute to increasing the college enrollment rates of students at risk of dropping out of high school and of students whose parents had no college experience" (pp. 46, 51). With regards to graduates who had been at moderate to high risk of dropping out of high school, Choy et al. (2000) found that

> [p]arental involvement was . . . important in predicting enrollment. The odds of enrolling in college were almost twice as great for students whose parents frequently discussed school-related matters with them as for those whose parents had little or no discussion with them. (pp. 53, 56)

With regards to graduates whose parents had no college experience, Choy et al. (2000) found that

> [a]long with being less likely to participate in a rigorous mathematics curriculum, students whose parents did not attend college were also less likely than their peers with more educated parents to participate in planning activities that lead to college enrollment, even when the students were college qualified, as defined earlier. (p. 59)

Search. Mansfield and Warwick (2005), after reviewing previous studies (The Carnegie Foundation, 1986; Dixon and Martin, 1991; Flint, 1992), noted that these "all report[ed] high school seniors identify[ing] parents as primary influencers in college choice decisions and the most influential people in helping them select a college" (pp. 50-51). Likewise, Paulsen (1990) concluded, "The studies seem to suggest that, in general, the most preferred sources of information about college attributes in the search and application phase include admissions officers, college publications, high school counselors, alumni, college students, commercial guides, campus visits, and parents" (p. 53).

Paulsen (1990), after reviewing previous research (Zemsky, Shaman, and Berberich, 1980; Hearn, 1984; Tierney, 1984; Zemsky and Oedel, 1983; Conklin and Dailey, 1981), found that when students' parents have greater educational attainment, he/she is more likely to apply to, or attend, a more highly selective institution, a high-cost institution, an institution located a greater distance from home, a private (rather than a public) institution, and a four-year institution; moreover, when student's parental encouragement is stronger, a person is more likely to apply to and attend a four-year institution (pp. 55-58). Similarly, the study done by MacDermott, Conn, and Owen (1987) found that first-generation students "were more likely to select schools of less stature or reputation," were "more likely to choose a community college," and chose an in-state school (p. 8).

Some research found that students with parents of higher educational attainment "are more likely to emphasize the importance of programs and high academic standards, and less likely to show concern about costs" (Paulsen, 1990, pp. 48-49).

Moreover, these students “tend to rely more on their parents for information and less on high school counselors” and “are more inclined to use commercial guidebooks, campus visits, admissions officers, and alumni,” while students with parents of lower educational attainment “depend more on the advice of high school counselors and unrequested publications” (Paulsen, 1990, p. 54). Furthermore, parents “generally defined the cost, geographic, and quality boundaries within which [their sons/daughters] were to remain in making their college selection. . . . [and] this boundary setting had a subtle but pervasive effect throughout . . . the college selection process” (Paulsen, 1990, p. 49). MacDermott, Conn, and Owen (1987), investigating the influence of parental educational level on college choice, found that

> [w]hen evaluating the factors important in selecting a college, first generation students were more concerned about financial aid, scholarships and tuition cost than were second generation students. Second generation students indicated more often that extracurricular activities were an important factor in choosing a school. . . .
>
> When describing a school of strong reputation, the first generation attenders were more likely to feel that solid financial backing, graduate degrees, and recognition for academic research were important characteristics. On one question, the second generation students exhibited attitudes different from those of their parents, agreeing that large lecture classes provide good instruction. They supported their parents’ view that student involvement with faculty is an important part of a school of academic quality. (pp. 7-8)

MacDermott et al. (1987) also found that “[f]irst generation students considered a smaller number of institutions and traveled fewer miles to visit a school” than students with college-educated parents (p. 8). In Litten and Brodigan’s (1982) six-market study, the eight college attributes which *both* students and parents rated as most important during the search and application process included financial, fields of study, academic reputation, teaching quality, academic standards, location, social atmosphere, and careers available (Paulsen, 1990, p. 50). Moreover, in the same study, students and parents identified the same six most preferred sources of information: admissions officers, college publications, high school counselors, commercial guides, alumni, and college students, with the lone exception being that “parents would add college faculty to the preferred list and students would not” (Paulsen, 1990, p. 50).

Mansfield and Warwick (2005) surveyed seniors from eight private, religiously affiliated schools from five states, evaluating the gender differences between students and between parents as to how they rate the level of importance of 19 college selection criteria, grouped into five categories: financial, social, psychological, physical, and functional.

The *financial* category includes the criteria of tuition, scholarships, and financial aid. The *physical* category has the criteria of security/safety, size, location, and weather. The *functional* category lists the criteria of academics, degrees, and professors. The *social* category contains the criteria of cultural diversity, friendly atmosphere, friends, prospects for marriage, social activities, athletics, and religious atmosphere. The *psychological* category has the criteria of reputation of the school and reputation of the degree (Mansfield & Warwick, 2005).

With regards to the parents surveyed, Mansfield and Warwick (2005) found that these categories were ranked differently by male and female parents, “with the males ranking the groups in order of financial, psychological, functional, social, and physical. Female parents felt the functional group was the most important, with financial following second, then physical, psychological, and social” (Mansfield & Warwick, 2005, pp. 69, 71). For parents, the most important criterion was academics (Mansfield & Warwick, 2005, p. 47).

For the “financial” category, the study found that “all three financial risk criteria were found in the top ten by level of importance” for the parent groups (Mansfield & Warwick, 2005, p. 71). For the “physical” category, the study found that the majority of the physical criteria “are not of major importance in the scheme of overall evaluation”; of interest is the finding that “safety/security is of more importance to parents than to their children with both mothers and fathers placing it in the top five criteria” (Mansfield & Warwick, 2005, p. 73). For the “functional” category, the study found that “all three of the functional risk criteria are attributes that are of importance to incoming students and parents, both male and female. However, academics are clearly of greater importance” (Mansfield & Warwick, 2005, p. 73). For the “social” category, the study found that “both male and female parents ranked religious atmosphere as the number one criterion of importance when choosing a college for their children”; however, the authors acknowledged that “[t]his finding is most likely due to the sample used in this study and cannot necessarily be generalized to other institutions” (Mansfield & Warwick, 2005, p. 74). All of the other social criteria were ranked below the top ten in importance (Mansfield & Warwick, 2005, p. 74). For the “psychological” category, the study found

that the “reputation of the school was found to be ranked third in level of importance for the male parents, and eighth for females” (Mansfield & Warwick, 2005, p. 74).

Using the National Education Longitudinal Study (NELS:88/92) and the Beginning Postsecondary Student Longitudinal Study (BPS:90/92), Hurtado, Inkelas, Briggs, and Rhee (1997) discuss their findings which relate to the number of applications students submit across racial/ethnic lines,

> For white students, father’s education is a significant predictor of the number of applications individuals will submit. While mother’s education is significantly correlated with the number of applications a student submits, this drops to nonsignificance when other controls are employed. However, this relationship between parental education and the number of applications submitted is not significant across the other racial/ethnic groups. This may indicate that while African American and Latino parents may have high aspirations for their children, family income differences play a more significant role than parents’ education in determining different strategies for selecting a range of colleges. Since measures of ability are the main predictors of the number of college applications submitted among Asian Americans, it may be that the advice that these families provide is strongly linked with the students’ achievement since neither family income nor parental education are significantly associated with strategies for selecting a range of institutions for college applications. (p. 57)

Choice. McDonough’s (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified parents among the factors “consistently influential” in the search and choice phases of

students' college choice process (p. 4). Using data from the College Admissions Project (which includes data on 3,240 students from 396 United States high schools), Avery and Hoxby (2004) found that, overall, "students whose parents have high incomes or who themselves graduated from very selective colleges . . . exhibit[ed] less sensitivity to variables that affect college costs" (p. 288). In their study, MacDermott, Conn, and Owen (1987) found a

> disparity in responses between students and parents when indicating whether or not they reached agreement on the student's college choice. Invariably the students felt that the parents had agreed with their selection. The parents, however, admitted that the agreement was more often only partial. This seems to indicate that the parents have allowed for a freer range of choice as the selection process advances. They act primarily as a veto, permitting the stuent to make a choice, which may not be their own first choice, but is acceptable nevertheless. (p. 9)

Guidance Counselors

Rowe (2002) observed that "[r]esearch on the influence of school counselors on the college choice process is not extensive and its conclusions are not unanimous on the strength of this influence" (p. 48). Moreover, there is some evidence that points to the "declining influence of the high school counselor in the college choice process of seniors" (Rowe, 2002, pp. 50-51). Hossler and Foley (1995) noted that some evidence indicates that high school students depend heavily on "internal sources of information (parents and other family members) when they begin their college choice process

(freshman and sophomore years), but then they turn increasingly to outside sources of information in their junior and senior years (peers, teachers, and counselors)" (p. 25).

Predisposition. Based on previous research, Paulsen (1990) concluded that a person is more likely to want to attend college "when school counselors encourage college attendance" (p. 37).

Search. The guidance counselor(s) of a high school are important sources of information consulted by students during the *search* phase of the college choice process, as research has shown. In Litten and Brodigan's (1982) six-market study, high school counselors is included among the six most preferred sources of information by students and parents during the search and application process (Paulsen, 1990, p. 50). Braxton's (1990) limited literature review included guidance counselors among the most frequently used sources of information by students during the search stage (p. 59). Paulsen (1990), after reviewing previous research (Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975; Gilmour et al., 1978), concluded, "The studies seem to suggest that, in general, the most preferred sources of information about college attributes in the search and application phase include admissions officers, college publications, high school counselors, alumni, college students, commercial guides, campus visits, and parents" (p. 53).

Some research indicate that preferred information sources may differ by student gender, parental education, and socioeconomic status (Paulsen, 1990, pp. 53-54). Referring to previous studies (Lewis and Morrison, 1975; Gilmour et al., 1978; Litten, 1982; Leslie, Johnson and Carlson, 1977), Paulsen (1990) found that men, students with lower parental education, and students at lower income levels rely more on high

school counselors (pp. 53-54). Cabrera and La Nasa (2000), reviewing previous studies (Berkner and Chavez, 1997; Tierney, 1980; Leslie, Johnson, and Carlson, 1977), found "low-SES students relying on high school counselors as the single most likely source of information about college [while, in contrast] upper-income students report a variety of sources" (pp. 10-11). As Espinoza insightfully observed, "Although the opinions of these educational professionals may not be influential to all prospective students, they are uniquely positioned in high schools to shape the early perceptions of students about their higher educational options, particularly in-state ones" (pp. 47-48).

Choice. McDonough's (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified guidance counselor among the factors "consistently influential" in the search and choice phases of students' college choice process (p. 4). Regarding the role of counselors in the final phase of students' college choice process, Espinoza (2001) concluded,

> Although several studies report that most students consider their high school counselor as a source of information, there is not much evidence that high school counselors influence the final college choice decision . . . Most high school counselors, in fact, report that they do not influence the college choice decision and view their role as one of only providing students with information about possible college choice options . . . Thus, although these educational professionals are well-positioned to influence the college search process, they do not play a large role in the final college choice. (p. 65)

Friends

Predisposition. Paulsen (1990), based on previous research (Carpenter and Fleishman, 1987; Manski and Wise, 1983; Davis and Kandel, 1981; Nolfi et al., 1978), concluded that a person is more likely to want to attend college "when student peers plan to go to college" (p. 37).

Search and Choice. Friends are important sources of information consulted by students during the *search* and *choice* phases of the college choice process, as research has shown. McDonough's (1997) review of previous studies (Hossler, Braxton, and Coopersmith, 1989; Manski and Wise, 1983; Zemsky and Oedel, 1983) identified peers and friends among the factors "consistently influential" in the search and choice phases of students' college choice process (p. 4). Lewis and Morrison (1975) included "friends" among the information sources on which students frequently rely (Paulsen, 1990, p. 53). Rowe (2002), in her limited review of literature (Mathay, 1989; Carnegie Foundation for the Advancement of Teaching, 1986), found friends and peers to be influential in the college choice process (pp. 46-48).

Using data from the National Educational Longitudinal Study of 1988 (NELS), which started with surveying a nationally representative sample of 1988 eighth graders, with follow-up surveys in 1990, 1992, and 1994, research by Choy, Horn, Nuñez and Chen (2000) suggest that "parents, peers, and school personnel can all contribute to increasing the college enrollment rates of students at risk of dropping out of high school and of students whose parents had no college experience" (pp. 46, 51). Their study found that

> [p]eer group effects were especially strong. In fact, having friends with college plans was the strongest predictor of college enrollment. If most or all of their friends had college plans, the odds of moderate- to high-risk students enrolling in college were four times higher than if none of their friends planned to go to college. (Choy et al., 2000, p. 53)

However, Braxton's (1990) research found that "encouragement from peers has little relationship to the type of institution selected" (i.e. selective, private versus public, etc.) (p. 60).

College/University Search Activities: College Marketing

"The higher education marketplace has become increasingly noisy; students and their families are inundated with direct mailings, telemarketers, . . . television, radio, and billboard advertisements," and now e-mail and internet advertisements (Hossler & Foley, 1995, pp. 21-22). College marketing techniques now involve the juxtaposition of traditional venues and newer methods, which harness the power of cutting-edge technologies. As Kinzie, Palmer, Hayek, Hossler, Jacob, and Cummings (2004) note,

> Although institutional recruiting still included the staples of direct mail, visits to high schools, college fairs and campus visits, colleges and universities adopted more sophisticated marketing and recruiting strategies. New marketing media and techniques such as CD-ROMs, electronic mail distributions, permission marketing and the World Wide Web altered the way colleges and universities communicated with prospective students. . . .
>
> Today, the amount of information about postsecondary education available to students can be overwhelming. Many potential applicants receive

campus viewbooks and direct mail, listen to the anecdotal testimony of friends and families, and learn about potential colleges and universities through Web sites, college ranking guidebooks, videocassettes, DVDs and CD-ROMs. (pp. 33, 35)

Indeed, as Hossler (1999) observed, “The Web has the greatest potential for an immediate impact by rapidly expanding the levels of personalized service for prospective and currently enrolled students” (p. 25).

Search

Hossler and Foley (1995) noted that “[r]esearch suggests that students do not rely on written material (college catalogues, viewbooks, and other written material) extensively until they are well into the college decision-making process” (p. 24). After reviewing previous research (Leslie, Johnson, and Carlson, 1977; Lewis and Morrison, 1975; Gilmour et al., 1978), Paulsen (1990) concluded, “The studies seem to suggest that, in general, the most preferred sources of information about college attributes in the search and application phase include admissions officers, college publications, high school counselors, alumni, college students, commercial guides, campus visits, and parents” (p. 53). Braxton’s (1990) limited literature review yielded a variety of information sources used by high school students during the search stage, including college guidebooks, friends, campus visits, college publications (e.g. catalogues), guidance counselors, current college students, and admissions officers (p. 59). In Litten and Brodigan’s (1982) six-market study, *both* students and parents identified the same six most preferred sources of information during the search and application process: admissions officers, college publications, high school counselors, commercial guides,

alumni, and college students, with the lone exception being that “parents would add college faculty to the preferred list and students would not” (Paulsen, 1990, p. 50). However, as Hossler and Foley (1995) note, the impact of written materials from colleges on students’ choices is not clear.

> Chapman (1981), for example, found that most students used college catalogues to confirm decisions they had already made about institutions rather than to help them decide which campuses to more seriously consider and which institutions to drop from further consideration. In their review of existing research on college choice, Hossler, Braxton, and Coopersmith (1989) noted that admissions representatives and college-marketing efforts (except for financial aid offers) have only a minor effect on student enrollment decisions. (Hossler & Foley, 1995, p. 26)

Paulsen (1990) finds that “the preferred information sources may vary according to some student characteristics including sex, race, parental education, income, and academic ability” (p. 53). He observes,

> While men and women utilize college catalogs and campus visits with similar frequency, women tend to seek the advice of college students more than men do, while men rely more on high school counselors than women do . . . Blacks appear to consult a greater variety of information sources than whites do. . . .
>
> Students with higher levels of parental education tend to rely more on their parents for information and less on high school counselors. Such students also are more inclined to use commercial guidebooks, campus visits, admissions officers, and alumni. Students with lower parental education depend more on the

> advice of high school counselors and unrequested publications . . . Students at higher income levels also tend to depend more on their parents for information, while lower-income students more often consult with high school counselors. (Paulsen, 1990, pp. 53-54)

Similarly, Cabrera and La Nasa (2000), reviewing previous studies (Tierney, 1980; Leslie, Johnson, and Carlson, 1977), found "low-SES students relying on high school counselors as the single most likely source of information about college [while, in contrast,] upper-income students report a variety of sources including parents, students, catalogues, college representatives, and private guidance counselors" (pp. 10-11).

Extrapolating from "more broadly based studies on the college choice processes of traditional age high school students," Hossler and Foley (1995) conclude that "[t]he limited research available and the observations and experiences of admissions officers suggest that guidebooks and ratings have a small to negligible impact on most students considering colleges and universities" (pp. 21-23). They suggest that

> [f]or many students and their families, these guidebooks [e.g. *U.S. News & World Report's* "America's Best Colleges" and *Money Guide: Your Best College Buys Now*] may have little impact or serve only as confirmatory devices, helping them to feel comfortable with decisions they have already made. However, for middle- and upper-middle-class students and parents, especially those considering regional private and public institutions, ratings and rankings may be important sources of information that help to eliminate some colleges and universities from further consideration, while elevating others for further evaluation. (Hossler & Foley, 1995, p. 29)

Drawing data from the Cooperative Institutional Research Program's (CIRP) 1995 Freshman Survey, McDonough, Antonio, Walpole, and Pérez (1998) investigated the importance of national college rankings to the college choice decisions of students. They found that "[o]verall, 59.9% of students find rankings to be not at all important, 29.6% cite rankings as *somewhat important*, and 10.5% rate them as very important in their college choices" (McDonough, Antonio, Walpole, & Pérez, 1998, p. 520). Moreover,

> students who find newsmagazine rankings to be very important in the process of choosing their college are distinct from other students in a number of important ways. First, these students are more likely to be Asian-American, from high-income families, and from families with college-educated parents. They are also more likely to ask their high school teachers for advice, receive A grade in high school, and have intentions of getting doctoral, medical, or law degrees. At higher rates than other students, they live away from home during college, expect to be satisfied with college, and have more favorable assessments of their academic ability and motivation. Finally, students who place a high importance on national rankings of colleges are more likely to file higher numbers of applications and attend private universities. (McDonough et al., 1998, p. 523)

Using a nationally representative sample of Asian American first-year, first-time freshmen drawn from the 1997 Freshman Survey (sponsored by the Cooperative Institutional Research Program at the University of California, Los Angeles), Teranishi, Ceja, Antonio, Allen, and McDonough (2004) investigated the "postsecondary decisions, opportunities, and destinations of APA students from different ethnic and socioeconomic

class backgrounds" (pp. 528, 532). They found that "Chinese Americans and Southeast Asian Americans also had the largest gaps between their high and low SES students in how influential magazines rankings were on their college destinations. Korean Americans had the smallest gap across the different income levels" (Teranishi et al., 2004, p. 540).

Connection of Factors with Survey

Table 1 connects the college choice factors previously discussed with the questions in the College Choice Survey for High School Seniors. Two factors—security (Question 22) and pastor/religious adviser (Question 28)—were added based on feedback from pilot studies conducted in the Philippines, although these were not major college choice factors in the United States research.

Table 1

College Choice Factors and Survey Questions

College choice factors	Survey questions
	STUDENT CHARACTERISTICS
Academic ability	43. What is your overall high school grade average?
	39. What is your class section?
Socioeconomic status	46. What was the approximate income (*in pesos*) of your parents/guardians last year?
Race/ethnicity	40. What is your race/ethnicity?
High school environment	

(*table continues*)

Table 1 (*continued*).

College choice factors	Survey questions
Educational aspirations/ expectations	37. What is the highest academic degree you plan to attain in your lifetime?
Gender	38. Gender
	INSTITUTIONAL CHARACTERISTICS
Academic quality	1. Quality of professors
	2. Good academic reputation
	5. Quality of major/s and courses I am interested in
	6. Quality of learning resources and facilities (library, computers, laboratories, etc.)
	7. Interaction between students and professors
	8. Focus on undergraduate education
Programs of study	3. Variety of majors and courses
	4. Offers the major(s) and courses I want
Cost and financial aid	9. Cost of attending college
	10. Room and board expenses
	11. Availability of scholarships/financial aid
	12. Availability of internship/co-op opportunities
	13. Availability of loans
Location	20. Convenient driving distance from home
	21. Quality of campus residence halls
	45. Where do you plan to live when attending college?

(*table continues*)

Table 1 (*continued*).

College choice factors	Survey questions
Social atmosphere	14. Variety of extracurricular activities (clubs, music, theater, etc.)
	15. Quality of social life/activities
	16. Being with my friends
	17. Opportunity to interact with students from different backgrounds
Future job opportunities	19. Future job opportunities
Religious emphasis	18. Christian (Protestant) environment
	41. Religion
	SIGNIFICANT OTHERS
Parents	23. Advice of parents/guardians
	24. Advice of father/male guardian
	25. Advice of mother/female guardian
	44. What is the highest level of education achieved by your parent/s/guardian/s?
Guidance counselors	26. Advice of guidance counselor/s
Friends	27. Advice of friends
	42. Among your close friends, how many plan to attend college?

(*table continues*)

Table 1 (*continued*).

College choice factors	Survey questions
	COLLEGE/UNIVERSITY SEARCH ACTIVITIES
College marketing	29. Visits by college admissions officers to GCHS
	30. College literature (catalogs, flyers, brochures, etc.)
	31. College website
	32. College DVDs/CD-ROMs/videos
	33. Campus visit
	34. Contact with college professors
	35. Contact with college alumni
	36. Contact with college students

Philippine Higher Education and College Choice Research

This section will provide some background of the Philippines and its educational system, briefly elaborate on aspects of Philippine higher education, and review college choice research in that country.

Background

The Philippines

The Philippines is a Southeast Asian archipelago with 7,107 islands, spanning some 1,200 miles (north to south) (Swinerton, 1991, p. 11). As of May 2000, the nation's population numbered some 76.5 million (*The Official Website of the Republic of the Philippines: General Information*, 2008). This tropical country is composed of three island groups—Luzon (north), Visayas (central), and Mindanao (south). The nation has "17 regions, 81 provinces, 136 cities, 1,494 municipalities, and 41,995 barangays"; a barangay is the "smallest political unit into which cities and municipalities in the Philippines are divided. . . . consist[ing] of less than 1,000 inhabitants residing within the territorial limit of a city or municipality" (*The Official Website of the Republic of the Philippines: General Information*, 2008).

According to the country's official website, "Filipinos are probably one of the few, if not the only, English-proficient Oriental people today. Filipino is the official national language, with English considered as the country's unofficial one" (*The Official Website of the Republic of the Philippines: General Information*, 2008). Moreover, English is "the medium of instruction in higher education" (*The Official Website of the Republic of the Philippines: General Information*, 2008). By one estimate, this country has around "76 to 78 major language groups, with more than 500 dialects" (*The Official Website of the*

Republic of the Philippines: General Information, 2008). In the area of religion, "[s]ome 80 percent of the population is Catholic, Spain's lasting legacy. About 15 percent is Moslem and these people can be found basically in Mindanao. The rest of the population is made up mostly of smaller Christian denominations and Buddhist" (*The Official Website of the Republic of the Philippines: General Information*, 2008).

Zwaenepoel (1975), who wrote the 768-page *Tertiary Education in the Philippines, 1611-1972: A Systems Analysis*, observed that "[t]he Filipino has . . . a foothold in many cultural spheres: the Malayan, the Anglo-Saxon, the Hispanic, the Hindu-Islamic, and even the Chinese" (p. 473). The Filipino culture is a blend of the Hispanic, Islamic, American and Chinese cultures, reflecting diverse ethnic and historical influences (*Philippine Higher Education: A Brief Guide*, n.d., p. 2). Close family ties are said to be inherited from the Chinese, the piety of the people from the Spaniards, and gracious hospitality is a common Filipino trait (*Philippine Higher Education: A Brief Guide*, n.d., p. 2).

The Educational System

The Philippine formal educational system is a sequential progression of academics at three levels—elementary, secondary, and tertiary (*Philippine Higher Education: A Brief Guide*, n.d., p. 3). Classes begin in June and end in March; Philippine universities and colleges "follow the semestral calendar from June-October and November-March" (*The Official Website of the Republic of the Philippines: General Information*, 2008).

Elementary and Secondary Education. Elementary education is the first stage of formal schooling, with six years of instruction for children around 7 to 12 years old.

Secondary education is the next stage, entailing four years of schooling for young people around 13 to 16 years old (*Philippine Higher Education: A Brief Guide*, n.d., p. 3). The Department of Education (formerly known as the Department of Education, Culture and Sports) supervises the nation's 48,446 elementary and secondary schools, divided as follows: 40,763 elementary schools (36,234 public and 4,529 private), 7,683 secondary schools (4,422 public and 3,261 private) (*Republic of the Philippines Department of Education: Historical Perspective of the Philippine Educational System*, 2008). After graduating from high school, students may opt to continue their formal schooling by taking technical-vocational courses, or enrolling in a college or university.

Post-Secondary Technical and Vocational Education. Post-secondary technical-vocational education provides skills orientation training and development for a particular occupation or group of middle-level occupations. It is structured, leading to one- or two-year certificates for middle-level occupations (*Philippine Higher Education: A Brief Guide*, n.d., p. 4). The Technical Education and Skills Development Authority (TESDA) is the national agency that plans, sets standards, coordinates, monitors and allocates resources in this area (*Philippine Higher Education: A Brief Guide*, n.d., p. 4).

Higher Education in the Philippines: A General Overview

This section will address historical milestones, the creation of the Commission on Higher Education (CHED), some current aspects of Philippine higher education, and attitudes towards higher education.

Historical Milestones

Spanish Colonization (1521-1898). The University of Santo Tomas, which was able to grant doctoral degrees by the end of the Spanish period, is an enduring legacy

of Hispanic rule (Gonzalez, 1997, p. 272). Some other contributions in education included parish schools which taught basic literacy and religion in over one thousand areas, seminaries which also admitted nonclerical students, secondary-level convents for girls, and some nationally known secondary schools (e.g., the Ateneo Municipal and the Colegio de San Juan de Letran for boys) (Gonzalez, 1997, p. 272).

American Period (1898-1946). In the American period, several tertiary-level institutions were founded. These included the University of the Philippines, the Philippine Colleges of Arts and Trade, the Philippine Normal School, and the Philippine College of Commerce. Arts and trades schools, as well as agricultural schools, were established throughout the nation (Gonzalez, 1997, p. 272). During this time, private colleges and universities served only 11 percent of the college population, while government institutions served 89 percent of the students (Gonzalez, 1997, p. 272). This period saw the setup of a system of public elementary schools, which has been responsible for the growth of literacy and the present educational level of Filipinos (Gonzalez, 1997, p. 272).

According to Gonzalez (1989), in the area of higher education, “the one failure of the American Colonial Government . . . was the failure to establish an indigenous tradition of research except at the University of the Philippines, because of the long period of gestation that a research tradition demands” (p. 119). He observed that “[t]he private institutions were, for the most part, teaching institutions” (Gonzalez, 1989, p. 121). Rather,

> [t]he focus of Philippine higher education then was professional training, a *carrera* (literally, Spanish “career” but here meaning professional preparation for

> a career), embedded in the Philippine psyche by the Spanish tradition: law, medicine, the priesthood, and, as a result of American influence, other *carreras* such as engineering, nursing, business (commerce) and economics, agriculture, medical technology and computer science. (Gonzalez, 1989, p. 122)

Post-World War II. The postwar independence government adopted a laissez-faire policy in education. Private schools were permitted to be established without tuition regulations, without efforts to direct students towards specific fields, but with state supervision regarding compliance to minimum standards. These schools were supported by tuition fees alone, without state aid (Gonzalez, 1997, pp. 265, 272-273). At one point, almost 85 percent of students were attending private universities (Gonzalez, 1997, pp. 265, 272-273).

1969—Beginning of Regulation. In 1969, the Philippine government conducted a survey and evaluation, in an effort to avoid mismatch between graduates and available jobs. Around the same time, student protests against high tuition fees culminated in a legislative act, which allowed the Department of Education to begin regulating tuition and fees (Gonzalez, 1997, p. 265). Thereafter, for more than a decade, the tuition and fees of private higher education institutions were regulated, and concentrated efforts were made to follow a central plan (Gonzalez, 1997, p. 265).

1992—Deregulation. At the beginning of the Ramos administration (in 1992), the secretary of education deregulated tuition fees, programs, and curricula, and encouraged the opening of new institutions. A laissez-faire policy was restored to the system (Gonzalez, 1997, p. 265). The beginning of the end of regulation had already

been evident in the twilight years of the Marcos regime (1965-86), and during the Aquino administration (1986-92) (Gonzalez, 1997, p. 265).

The Results of a Laissez-Faire Policy. Gonzalez (1997) observed that while laissez-faire educational permissiveness has solved the social problem of providing educational opportunities for the college-age population, there has not been a corresponding structure to monitor the market in such a way that it will produce the needed types of manpower for national development (p. 265).

The Commission on Higher Education (CHED)

The 1993 EDCOM (Congressional Commission on Education) report pointed out that Philippine higher education was characterized by large enrollment, unbalanced distribution, under-investment and poor quality, mismatch between programs and graduates, and between employment and societal needs, and limited and underdeveloped graduate education (Dizon, in press). A major recommendation was to restructure the educational bureaucracy with the intent that focused attention could be given to each subsector (Dizon, in press). Thus, in 1994, RA 7722 created the Commission on Higher Education (CHED) to govern the higher educational system, and RA 7796 created the Technical Education and Skills Development Authority (TESDA) to govern post-secondary technical and vocational education (Dizon, in press). Created independent of and coequal with DECS [Department of Education, Culture and Sports, now known as the Department of Education], the Commission on Higher Education (CHED) was to focus on system governance and policy guidance over all public and private institutions of higher education, as well as degree-granting programs in all post-secondary educational institutions (Dizon, in press). Thus, “[t]he trifocal education

system refocused DECS' mandate to basic education which covers elementary, secondary and nonformal education, including culture and sports. TESDA now administers the post-secondary, middle-level manpower training and development while CHED is responsible for higher education" (*Republic of the Philippines Department of Education: Historical Perspective of the Philippine Educational System*, 2008).

Some Current Aspects of Philippine Higher Education

This section will highlight some current aspects of Philippine higher education, including distribution of institutional types, enrollment, predominance of undergraduate enrollment, entry level, socioeconomic status and college choice, scholarships and other student assistance programs, commuter institutions, student services, accreditation, professional board examinations, and lack of research.

Distribution of Institutional Types. In 2004-2005, the Philippines had 1,619 institutions of higher education (excluding the 271 satellite campuses) (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 1). Public institutions numbered 176. This figure included 111 State Universities and Colleges (SUCs), 50 Local Universities and Colleges (LUCs), 1 CHED Supervised Institution (CSI), 9 other government schools (OGSs), and 5 special schools (SSs) (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 1). According to the Commission on Higher Education (2008),

> The State Universities and Colleges (SUCs) are chartered public higher education institutions established by law, administered and financially subsidized by the government. The Local Universities and Colleges (LUCs) are those established by the local government through resolutions or ordinances. LUCs are

> financially supported by the local government concerned. The CHED Supervised Institution (CSI) is non-chartered public post-secondary education institution established by law, administered, supervised and financially supported by the government. Other Government Schools (OGS) are public secondary and post-secondary education institutions usually a technical-vocational education institution that offer higher education programs. Special HEIs are directly under the government agency stipulated in the law that created them. They provide specialized training in areas such as military science and national defense. (*Commission on Higher Education: Higher Education System*, 2008)

Private institutions totaled 1,443—340 sectarian and 1,103 non-sectarian (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 1). Dizon (in press) points out that "[h]istorically, the private sector has dominated higher education in terms of number of institutions and enrollment." As the Commission on Higher Education (2008) notes,

> Private higher education institutions are established under the Corporation Code and are governed by special laws and general provisions of this Code. Those under non-sectarian are duly incorporated, owned and operated by private entities that are not affiliated to any religious organization while those under sectarian are usually non-stock, non profit, duly incorporated, owned and operated by a religious organization. (*Commission on Higher Education: Higher Education System*, 2008)

Commenting on the diverse educational quality provided, Johanson (1999) writes,

the Philippines system of higher education offers diversity in content, quality and price. Very high quality exists at high prices in some selective private sector institutions. Huge government subsidies are provided per student at the highly selective and high quality UP system. However, low quality and relatively low costs of mass private education ("diploma mills") also characterize the system. (p. 5)

Table 2 reports the distribution of higher education institutions by sector (public or private) and institutional type in 2004-2005.

Table 2. Distribution Higher Education Institutions by Sector and Institutional Type AY2004-2005

Sector	Type	Main	Satellite	w/ Sat.
Public	State Universities and Colleges (SUCs)	111	271	382
	Local Universities and Colleges (LUCs)	50		50
	CHED Supervised Institution (CSI)	1		1
	Other Government Schools (OGSs)	9		9
	Specials Schools (SSs)	5		5
Total Public		*176*	*271*	447
Private	Sectarian			340
	Non-Sectarian			1,103
Total Private				*1,443*
Grand Total		**1,619**		**1,714**

Note:

25 extension campuses/annexes/tie-ups of SUCs with local government units are not included.

Source: *Higher Education Statistical Bulletin: Academic Year 2004-2005* . (2006). Pasig City, Philippines: Commission on Higher Education.

Enrollment in Higher Education. The numbers have increased steadily from 1.55 million students in 1990-1991 to 1.87 million in 1994-1995, to more than 2.5 million in 1999-2000 (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 18). In 2004-2005, enrollment in higher education

numbered some 2.4 million (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 3). A distinctive feature of Philippine higher education is the high proportion of students enrolled in private institutions (Johanson, 1999, p. 1). In 2004-2005, some two-thirds of students were enrolled in private higher education institutions (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 3). However, the trend "shows a decline in the share of private education in total enrollments, as public higher education has grown" (Johanson, 1999, p. 2). The public sector has gradually increased its intake of students relative to the private sector—accounting for 34 percent of the total enrollment in 2004-2005, from 26 percent in 1999-2000, 21 percent in 1994-1995, and 19 percent in 1990-1991 (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 18; *Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 3). In 2004-2005, some 54% of total enrollment in higher education was female (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 3). According to Johanson (1999), "[t]he 'transition rate' between secondary and higher education is exceptionally high . . . The transition rate reportedly has increased from 83 percent of high school graduates in 1995 to about 90 percent in 1999" (p. 1). Table 3 reports the higher education enrollment by sector (public or private), institutional type, and gender in 2004-2005.

Table 3. Enrollment by Sector, Institutional Type and Sex
AY2004-2005

Sector	Type	Sex		Grand Total
		Male	Female	
Public	SUCs	321,509	423,242	**744,751**
	LUCs	23,815	44,916	**68,731**
	CSI	64	43	**107**
	OGSs	2,313	2,306	**4,619**
	SSs	880	163	**1,043**
Total Public		348,581	470,670	**819,251**
Private	Sectarian	214,976	262,462	**477,438**
	Non-Sectarian	536,642	568,984	**1,105,626**
Total Private		751,618	831,446	**1,583,064**
Grand Total		**1,100,199**	**1,302,116**	**2,402,315**

Note:

Based on the retrieved data from 1,735 HEIs (399 public including satellite campuses and 1,336 private HEIs) out of 1,890 total number of HEIs for AY04-05.

Source: *Higher Education Statistical Bulletin: Academic Year 2004-2005* . (2006). Pasig City, Philippines: Commission on Higher Education.

Predominance of Undergraduate Enrollment. "Undergraduate enrollments predominate in higher education" (Johanson, 1999, p. 4). In 2004-2005, 85% of total higher education enrollment was in baccalaureate programs, while 3.6% was in masters programs, and 0.4% in doctoral programs (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 6). Table 4 reports the higher education enrollment by sector, institutional type, and program level in 2004-2005.

Table 4. Enrollment by Sector, Institutional Type and Program Level
AY 2004-2005

Sector	Type	Program Level					Grand Total
		Pre-Baccalaureate	Baccalaureate	Post-Baccalaureate	Master's	Doctoral	
Public	SUCs	83,129	615,062	3,470	37,733	5,357	744,751
	LUCs	11,749	55,357	-	1,497	128	68,731
	CSI	-	107	-	-	-	107
	OGSs	1,308	2,742	507	62	-	4,619
	SSs	-	998	-	45	-	1,043
Total Public		96,186	674,266	3,977	39,337	5,485	819,251
Private	Sectarian	30,855	422,227	154	22,165	2,037	477,438
	Non-Sectarian	126,146	949,743	39	26,871	2,827	1,105,626
Total Private		157,001	1,371,970	193	49,036	4,864	1,583,064
Grand Total		253,187	2,046,236	4,170	88,373	10,349	2,402,315

Note:
Based on the retrieved data from 1,735 HEIs (399 public including satellite campuses and 1,336 private HEIs) out of 1,890 total number of HEIs for AY04-05.

Source*: Higher Education Statistical Bulletin: Academic Year 2004-2005* . (2006). Pasig City, Philippines: Commission on Higher Education.

Entry Level. The Philippines has "one of the shortest pre-entry systems of education in the world" (Johanson, 1999, p. 1). As Johanson (1999) explains

> It takes only 10 years of education to graduate from the four-year secondary education, compared with 12 years in most other countries. This means that higher education has younger (age 16 on average) and less educated students (in terms of years) with which to work than other systems of higher education in the region. (p. 1)

However, as Gonzalez (1989) notes,

> there are exceptions; most students studying in affluent primary and secondary schools have a year of kindergarten, seven years of primary and four years of secondary schooling. For bright students under this system, beginning levels at

the freshman year would be comparable to those of an American freshman. (p. 129)

Socioeconomic Status and College Choice.

Johanson (1999) describes how socioeconomic status affects college choice:

Higher education enrollments are generally biased towards the upper class. Specifically, selectivity in public HEIs [higher education institutions] discriminates against poorer students. Because of low tuition most SUCs [state colleges and universities] have to ration admissions. The UP [University of the Philippines] rejects more than 95 percent of the applicants . . . and the USEP in Davao rejects 90 percent. The selection processes are based on entrance examinations developed by each institution. Equity criteria are typically not part of the admissions process. Quite naturally, students who have gone to the best secondary schools or who have additional years of preparation at the secondary level . . . are favored on the entrance examinations. Students from high income families are those who most often attend the best secondary schools. Consequently, students from public high schools, particularly Baranguay high schools, are at a disadvantage in gaining entry into public higher education. Although the justification for public subsidies to the SUCs is ostensibly that they cater to poorer families, in fact this is often not the case. It is widely accepted, for example, that students at the UP – the best public institution in the country – come disproportionately from the upper classes. . . . UP does offer “socialized tuition,” in which students pay according to ability. But this does not compensate [for] the fact that poor students are not likely to be able to enter in the first place.

> Ironically, students of rich families attend public institutions at subsidized tuition while the poorest students have to pay much higher rates of tuition in private institutions. (p. 23)

In their 1995 report, the Commission on Higher Education's Task Force on Higher Education highlights how the imperfect capital market is biased against poorer students,

> Students have to rely on their family's support for their schooling. Considering the poverty situation in the country, where 50 percent of families are considered poor and those not considered poor still have low incomes, relatively few students can freely choose the best HE [higher education] options. The large majority of students are constrained therefore to choose from among low-cost HE categories even if they know they can do better by going to the better quality programs, or to programs with higher earning prospects. . . . [t]his financial problem leads to the concentration of enrollment in the less expensive schools and in the less expensive degree programs (i.e., those not requiring expensive laboratory fees and those of poorer quality). (*Philippine Higher Education in the 21st Century: Strategies for Excellence and Equity*, 1995, p. 109)

Scholarships and other student assistance programs. Underprivileged Filipinos have more access to higher education through government scholarship grants and student assistance programs. These CHED programs focus on key priority areas of the government, the poorest regions of the country, emerging needs of the country in response to calamities, and identification and nurturing of the most promising Filipino

children from low- and middle-income groups (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 20).

In 1999-2000, the total number of beneficiaries of these programs was 59,566 students (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 20). However, in 2000-2001, the number decreased to 44,868 students due to the discontinuance of some scholarship programs (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 20). In 2004-2005, the number decreased still further to 17,174 (*Higher Education Statistical Bulletin: Academic Year 2004-2005*, 2006, p. 31). In the overall picture, a relatively small number of students are helped by these government assistance programs. Table 5 reports the beneficiaries of CHED's student financial assistance programs in 2004-2005.

Table 5. Beneficiaries of CHED's Student Financial Assistance Programs
AY 2004-2005

REGION	No. of Scholar
CHED Scholarship Program for Bright Mindanaoan Muslims (CSPBMM)	31
CHED Special Study Grant Program for Congressional Districts (CSGPCD)	-
CHED-Senate Study Grand Program (CSSGP)	-
College Faculty Development Fund (CFDF)	165
Island Off- Luzon	
National Integration Study Grant Program (NISGP)	1,095
OPAPP-CHED Study Grant Program for Rebel Returnees (OPAPP-CHED-SGPRR)	817
Private Educationn Student Financial Assistance Program (PESFA)	11,939
Selected Ethnic Group Educational Assistance Program (SEGEAP)	1,062
State Scholarship Program (SSP)	1,108
State Scholarship Program-BSED-SSUC (SSP-BSED-SSUC)	104
Student Financial Assistance Programs (STFUP)	-
Student Loan Fund For Region V (SLF-R5)	-
Student Loan Program for Centers of Excellence (SLP for COE)	-
Study-Now-Pay-Later Plan (SNPLP)	853
Iskolar ng Mahirap na Pamilya (IPM)	-
Total	**17,174**

Source: Office of the Student Services (OSS)

Source: *Higher Education Statistical Bulletin: Academic Year 2004-2005* . (2006). Pasig City, Philippines: Commission on Higher Education.

Commuter Institutions. The ideal of the residential liberal arts college or a huge university campus in the countryside has not been fully realized in the Philippines (Gonzalez, 1989, pp. 123-124). As Gonzalez (1989) observes,

> Except for Silliman University in Dumaguete, the college complex at Los Baños, and the town which has grown up around Mindanao State University in Marawi City, there is no real university town in the Philippines. Neither the University of Santo Tomas nor the original University of the Philippines in Manila ever had university-sponsored dormitory facilities, although later on, when the University of the Philippines transferred to Diliman, dormitory buildings were erected. Presently, only a minority of faculty and students actually reside on the Diliman

> campus. The original intention of Ateneo University in transferring to Quezon City was to establish a residential academic community; this has not been fully realized, however, since only a minority of out-of-towners live in dormitories at Ateneo University. (p. 123)

The reality is that "[p]ractically all institutions are commuter institutions with students living in private homes, thus making out-of-town students a minority" (Gonzalez, 1989, p. 124).

Student Services. Gonzalez (1989) comments briefly on how the campus setup affects student services:

> This situation adversely affects the quality and quantity of student services. However, all Philippine universities feel that they need varsity sports programs especially in basketball, a large gymnasium, but little else for sports facilities. As the population has increased, strain has been placed on physical facilities, with use of classroom and laboratory facilities reaching a high of as many as 16 hours a day six days a week (with laboratories open even on Sundays), thus making the system one of the most efficient in terms of utilization of its physical space during the ten-month school year. (p. 124)

Accreditation of Higher Education. In the Philippines, "[a]ccreditation is voluntary and is done for programs rather than institutions" (Johanson, 1999, p. 4). According to the Commission on Higher Education (2008),

> The Federation of Accrediting Agencies of the Philippines (FAAP) as the umbrella organization of accrediting agencies has accredited a total of 597 higher education programs in 1998-1999 and 743 in 2000-2001, hence, an increase of

> 24 percent . . . Of the 743 programs, 643 are baccalaureate, 65 are Master's and 5 are Doctoral. In terms of accreditation level, 152 are Level I, 445 are Level II and 146 are Level III. The number of HEIs [higher education institutions] with accredited programs in 1998-1999 is 152 and 160 in 2000-2001, hence, an increase of 5.3 percent. (*Commission on Higher Education: Statistics: Accreditation of Higher Education Programs*, 2008)

Professional Board Examinations. The professional licensing examinations, given by the Professional Regulations Commission, tests in a variety of fields, "provid[ing] a *de facto* national 'exit' test of system effectiveness" (Johanson, 1999, p. 5). Performance is a "proxy measure of the quality of instruction against national standards in the various disciplines. [However,] [n]ot all graduates take the examination, particularly those who are likely to fail" (Johanson, 1999, p. 5).

Lack of Research. In general, research has been neglected in Philippine higher education institutions. Very few universities conduct extensive research. This situation is due to the inadequacy of institutional research facilities, as well as the lack of qualified faculty to conduct research (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 17). Moreover, the budget allocated for research has been minimal (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 17). In response, CHED has developed and disseminated the National Higher Education Research Agenda, which has provisions for grants to institutions and independent faculty members in the form of block grants, grants-in-aid, and grants for commissioned research (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p.

18). However, the processing of research proposals and awarding of research grants have been slow (*Medium-Term Higher Education Development and Investment Plan (MTHEDIP), 2001-2004*, 2001, p. 18).

Attitudes Towards Higher Education

The common man seems to have a strong attraction to tertiary education. So engrained is this in the Filipino psyche that a father is willing to sell his last piece of land, his work animal, just to be able to see his son through college (Rosas, 1988, p. 44). The attainment of a diploma is valued, whether or not one gets a job with it. It has been observed that, for the Filipino, education is viewed as a consumer item, rather than an investment (Gonzalez, 1987, p. 41). Practicing a profession seems to be secondary to finishing college and proving one's worth of having accomplished something. On the other hand, there is a stigma associated if one did not complete his college course (Gonzalez, 1987, pp. 41-42).

Moreover, according to Swinerton (1991), a Fulbright scholar researching Philippine higher education, "many students see access to credentials as providing social mobility to elite circles. . . . Many see higher education as a social value to improve their social status as well as an opportunity to expand career choices" (p. 31). According to the 1995 study conducted by the Commission on Higher Education's Task Force on Higher Education,

> Despite the job problem, many of our youth still find college education attractive. It qualifies them for white collar employment, which usually offers a number of advantages—more comfortable and safe workplaces, more regular and stable terms of employment, and social security protection. Besides, college education

improves their lifestyle and decision making if not their social standing. (*Philippine Higher Education in the 21st Century: Strategies for Excellence and Equity*, 1995, p. 6)

Referring to Nilo L. Rosas, previously director of the Bureau of Higher Education in the Department of Education, Culture and Sports, Swinerton (1991) writes,

> Rosas, correctly, underlines the problem of going to college to get a degree for social acceptance rather than to use that knowledge for career development and contribution to national development. If the degree is for social acceptance, students lack interest in academic preparation and worry less about the quality of the programs. (p. 31)

Moreover, as Swinerton points out,

> Jesus M. Jhocson, vice president of National University in the Philippines, writes in an article entitled “Technical Education in Philippine Private Schools” (1982) that a major problem is that students prefer baccalaureate courses rather than vocational courses. He writes: ‘High school graduates enter college and enroll in courses dictated by their parents or close kin, without regard to their particular aptitudes and ability. This is indicative of the lack of proper vocational guidance and counseling’ (1982:22). Throughout the Philippines, counseling and guidance are rarely available to help students to select tertiary schools, choose specific programs of study. (p. 31)

Review of College Choice Research in the Philippines

Research focused on the college choice of students in the Philippines is limited. The National Library of the Philippines is the official library of the country. An electronic

database search, conducted on January 8, 2008, using the keywords “college choice” yielded 34 titles. Most of these related to students’ decisions pertaining to their vocations/careers or to their college courses. Only three (reviewed below), which are institution-specific, related to students’ college choice.

The National Library permitted only the abstracts of theses/dissertations to be photocopied by a library attendant. In the cases where the abstract was absent (e.g. Recalde 1977; Concepcion 1973), the concluding chapter could be photocopied. However, this restriction, as well as the poor quality of some copied pages, severely limited this researcher’s ability to glean from these works.

Datuharon-Yahya (1989) investigated how demographic, intellectual, institutional, and reference group factors influenced the MSU Muslim high school graduates’ selection of the Mindanao State University, or of other higher education institutions. He utilized a questionnaire instrument, as well as interviews, on a random sample of 490 students from Muslim graduates of the MSU high schools in the Ranao area during the 1988-1989 school year. The data were analyzed using stepwise multiple discriminant analysis or canonical discriminal function and the ranking of mean scores. Datuharon-Yahya (1989) summarized his findings thus,

> 1. Of the 22 independent variables, only 10 were found to be significantly influential in the choice of Muslim high school graduates.
> 2. Of the 10 significant variables, 3, i.e., high school grades, scholarship privileges, and school facilities, equipment and books, were found to be influential in the choice to enroll at MSU Campus; 7, i.e., mothers’ educational attainment in western education, mothers’ occupation, mothers’ sources of

income, parents' income, perceived difficulty of the college admission test, school site and climate, and teachers and other school officials, were influential in the choice of other schools.

3. The 12 insignificant variables are sex, NCEE rating, prestige, variety of courses offered, low tuition fees, quality of faculty, enrollment and medical examination procedures, time spent in completing the course, peace and order condition, parents and relatives, peers and friends, and local and other community leaders. (p. xiv)

Recalde (1977) explored what factors influenced Adventist college-age young people to enroll in non-Seventh Day Adventist schools in Metro Manila, and what factors hindered them from attending an Adventist college (Recalde, 1977, p. 78). Concepcion (1973) studied the factors which influenced students to enroll in the Baguio Colleges Foundation, and compared group responses along the variables of sex, mental ability, residences, and economic status (Concepcion, 1973, p. 118).

Application of U.S. College Choice Research to the Philippines

The Western Impact on Higher Education in the Philippines

Dr. Andrew B. Gonzalez, former president of De La Salle University and author of several works on Philippine higher education, contends that "the Philippine college and university system exhibits all the trappings of the West, but over the years has manifested an acculturation and an indigenization which is uniquely Filipino" (Gonzalez, 1989, p. 117). Gonzalez (1989) explains that

one has in the Philippines a higher education system, the interesting post-colonial development of having the form of American higher education, a token

> homage paid to research, and service functions which are quite extensive in some institutions, but without the substance of American higher education; that is to say, the level of achievement sufficient to do tertiary-level academic studies in the American context, suitably qualified faculty with research experience themselves, a priority placed on research, proper support facilities by way of libraries and laboratories, a tradition not only of disseminating knowledge but also of creating new knowledge as an input to teaching and as a social intellectual service to the community, a genuine academic life style of the faculty, and an academic culture for the institution. (p. 129)

This assessment is balanced by noting some positive results of the Philippines higher education system. As Gonzalez (1989) points out,

> Whatever defects there are in the process, some of the products are excellent, indicating that at least at the level of teaching, the system has had its successes. Philippine nurses are in demand abroad and, until recently, so were doctors. Filipino engineers and technicians have met with considerable success in Nigeria and the Middle East. In services, Philippine domestics, hotel and restaurant workers, airline stewardesses are also in demand. Philippine managers and accountants are everywhere, especially in Asia and of course the United States. Teachers have found employment in Nigeria, Ethiopia at one time, and Zambia, as well as Papua New Guinea, although now most primary teachers working abroad find domestic employment in Hong Kong, Singapore, United Kingdom, France, Spain, and Italy. Moreover, the Philippines has sent a continuous though diminishing stream of graduate students to North America who can more than

> hold their own with their North American peers in master's and doctoral graduate study. . . . In Asia, the language skills of Filipinos for office work in multinational companies continue to be real assets for work in the service industries. (pp. 129-130)

Summarizing the overall impact of the American higher education model on the current academic condition in the Philippines, Gonzalez (1989) writes,

> In the contemporary academic situation, the structure, if not the substance, of the U.S. model of education continues to dominate. The language of instruction continues to be English, the fruits of American research and writing are the main sources of learning, and possible graduate training (mostly non-degree) is still an aspiration. Moreover, some American post-graduate experience is still possible for some faculty. American jurisprudence on higher education laws is still a point of reference in adjudicating cases arising in an academic community, albeit with recognition of Philippine precedents as an intervening consideration. Other aspects of American influence include the presence of specialists to assist in graduate teaching programs; the presence of United States foundations, both public and private, which continue to serve as a source of needed supplementary funding or loans for the system; and the use of voluntary accreditation as an instrument of quality control. Finally, the United States is still considered to be the land of opportunity for better graduates and therefore the target of immigration for many. The umbilical cord to the former colonial power has not been completely severed. The dependency continues to a large extent, albeit with clear manifestations and developments of independence in the use of Filipino as a

> language of scholarly instruction, the indigenization of teaching materials in the humanities and the social sciences, the doctrinal character of Philippine labor decisions superseding American jurisprudential traditions, local fund-raising to supplement tuition and government grants, the breakthrough in State aid to private education, and the slow development of local doctoral programs through cooperative inter-university arrangements (consortia) in all fields. All of these developments have led to the beginning of the establishment of a tradition of local research, promotion of research-oriented faculty, and the upgrading of faculty qualifications. (pp. 139-140)

Logic for Applying United States Research to the Philippine Situation

Therefore, since Philippine research on college choice was limited, and the influence of the U.S. model of education continued to dominate the nation's present academic situation (Gonzalez, 1989), this dissertation assumed the applicability of the college choice factors (as surfaced in United States research) to the Philippine situation. This study was potentially exploratory.

Findings Relate to Search and Choice Phases

For the purposes of this study, the search and choice phases of the Hossler and Gallagher (1987) model were combined and treated as a "single undifferentiated process" (Rowe, 2002, p. 6), as has been done in other studies (e.g. Campaigne & Hossler, 1998, p. 94; Rowe, 2002, p. 6). As Rowe (2002) explains,

> This three-phase process of college choice [predisposition, search, choice] is not a linear progression. Generally, the search and selection [i.e. choice] phases overlap significantly, recurring and reversing order as the student works through

> the process of choosing a college. While Hossler and Gallagher (1987) make a conceptual distinction between the second and third phases, in practice these are on going, and continuous in the student's process of choosing a college. (p. 6)

Philippine colleges and universities had their own institution-specific entrance exams, which were given at different times. For example, for the 2009-2010 school year, the University of the Philippines' College Admission Test was administered in early August (*University of the Philippines Diliman: Academic Calendar: Academic Year 2008-2009*, 2008). Ateneo de Manila University's College Entrance Test was given in mid-September (*Ateneo de Manila University: Undergraduate Program Admission: Latest Updates*, 2008). De La Salle University-Manila's College Entrance Test was administered several times in October (*De La Salle University Manila: Applications/Entrance Exams Timetable*, 2008). Likewise, the University of Santo Tomas' entrance exam was given several times from mid-August to the end of October.

For the 2009-2010 school year, Ateneo de Manila University, De La Salle University, and the University of Santo Tomas all gave out their student acceptance/rejection letters in January 2009. The University of the Philippines sent out its acceptance/rejection letters sometime during the last week of January to the first week of February 2009. Thus, during the timeframe of the administration of the College Choice Survey for High School Seniors (i.e. November 2008) most students had submitted application forms to the colleges/universities. Some were taking their college entrance exams, while others had completed that hurdle. Almost all were waiting to hear from the colleges/universities.

Therefore, based on deadlines at Philippine colleges/universities, students of AAA High School were in the Search and Choice phases of their college selection process, at the time they took the College Choice Survey for High School Seniors. The results of this study, then, related to the Hossler and Gallagher (1987) model's Search and Choice phases which, for the purposes of this study, were treated as a single, continuous process.

Summary

Since research focused on the college choice of students in the Philippines was limited, it was helpful for educational administrators to glean from the scholarly research of the United States, where investigation into this subject had spanned almost four decades. A review of United States research yielded several factors which were found to influence the college choice process of high school seniors. Although this list is not exhaustive, the author contends that it includes the most outstanding and relevant college choice factors, as surfaced by previous studies. These factors, divided into four categories, were (1) Student characteristics: academic ability, socioeconomic status, race/ethnicity, high school environment, educational aspirations/expectations, gender; (2) Institutional characteristics: academic quality, programs of study, cost and financial aid, location, social atmosphere, future job opportunities, religious emphasis; (3) Significant others: parents, guidance counselors, friends; (4) College/University search activities: college marketing. Appendix F summarizes research findings regarding student college choice characteristics and their implications for institutional practice.

The organizing framework for the research results referred to in this chapter was the Hossler and Gallagher (1987) model—with its three phases of predisposition, search, and choice (Teranishi et al., 2004, p. 531; Braxton, 1990, p. 58). This is considered by many to be the "prevailing [college choice] model" (Teranishi et al., 2004).

Thus, since Philippine research on college choice was limited, and the influence of the U.S. model of education continued to dominate the nation's present academic situation (Gonzalez, 1989), this dissertation assumed the applicability of the college choice factors (as surfaced in United States research) to the Philippine situation. This study was potentially exploratory.

Based on deadlines at Philippine colleges/universities, students of AAA High School were in the Search and Choice phases of their college selection process, at the time they took the College Choice Survey for High School Seniors (i.e. November 2008). The results of this study, then, related to the Hossler and Gallagher (1987) model's Search and Choice phases which, for the purposes of this study, were treated as a single, continuous process.

CHAPTER 3

RESEARCH METHODOLOGY

Theoretical Framework

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Research Design

This study employed a nonexperimental, quantitative research design. Specifically, both the descriptive and correlational research designs were used. Following were the two research questions of this study:

RQ1: How do high school seniors in the Philippines, in the search and choice phases of their college selection process, evaluate the relative importance of major college choice factors (as identified in United States research)?

RQ2: Do the relative importance ascribed to these major college choice factors (i.e. academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere) vary when the survey population was disaggregated by students' demographic attributes (i.e. academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence)?

The first research question was answered by using a descriptive research design, since the intent was to make careful descriptions of educational phenomena as they exist at one point in time (Gall, Gall, & Borg, 2003, pp. 289-290). The second research question was addressed by a correlational research design.

A survey instrument was utilized to gather data. The College Choice Survey for High School Seniors, developed by the researcher for this study, was administered to high school seniors at AAA High School. This survey instrument was designed to obtain the subjects' assessment of the relative importance of major college choice factors (as identified in United States research), as well as certain demographic data.

Procedure for Data Collection

Permission was granted by the Principal for AAA High School to participate in this study. Digital files of the survey instrument, as well as the informed consent and student assent forms, were e-mailed to Philippines, where these were printed. The Principal designated a school administrator to oversee data collection.

The informed consent and student assent forms were distributed to high school seniors. The students were given several days to have the forms completed by their parents/guardians. Then the College Choice Survey for High School Seniors was administered to high school seniors. Although the entire population of seniors had been given the opportunity to take the survey, due to IRB regulations, only seniors who had submitted the completed informed consent and student assent forms were actually given the survey. Moreover, the class section which had participated in the initial pilot study was not given the survey. In order to mitigate the effects of experimenter bias, the researcher followed the precautions suggested by Gall, Gall and Borg (2003), namely,

(a) provided instructions for the proctors of the survey, (b) not personally administer the survey, and (c) not inform the proctors that the response of the honors classes would be the experimental group in the study (p. 380).

The proctors in each classroom distributed the survey to the students. The seniors were given approximately 20 minutes to take the survey. After each student had submitted the completed surveys to the proctors, he/she was given the incentive item. According to Porter and Whitcomb (2004), "[n]umerous studies of various populations have examined the impact of prepaid incentives [when survey recipient gets the incentive with the survey] on survey response and the results indicate that their use invariably increases response rates" (p. 52). However, "promises of payment upon survey completion do not appear to affect respondent behavior" (Porter & Whitcomb, 2004, p. 53). The completed surveys, as well as the completed consent/assent forms, were sent to the researcher in Texas. Two hundred twenty-six surveys were returned, with a response rate of 76%.

Study Setting

AAA High School was a private college preparatory institution located in Metro Manila, Philippines. Established as an evangelical mission school to the Filipino-Chinese community, the institution had survived and flourished for some six decades. AAA High School provided three years of preschool instruction (Nursery, Kinder 1, Kinder 2), six years of elementary education, and 4 years of high school. Recently, AAA High School had launched into the higher education arena, by starting its own college.

Clientele of AAA High School were from upper-middle class families. Around 12-15% of the student population were under scholarship. Approximately 70-80% of

students were of Chinese ethnicity, 5% of Filipino ancestry, and 20% of mixed ethnicity. Students of AAA High School placed regularly in interscholastic competitions in the fields of math, science, English, social studies, sports, music and robotics. Almost every year, their students represented the country in international competitions in the areas of math and robotics.

Around 95% to 98% of AAA High School's graduates continued their education at a college or university. Most chose a higher education institution in the Philippines, while a few opted for colleges/universities abroad (e.g. Purdue University). The top schools attended by graduates of AAA High School included the University of the Philippines, Ateneo de Manila University, De La Salle University, and the University of Santo Tomas.

AAA High School's recent venture into the arena of higher education had stimulated interest in the college selection process of high school seniors, for purposes of enhancing the recruitment of students. The institution (here referred to simply as AAA High School) was not identified by name, in order to facilitate objective critique of the findings.

Study Population

AAA High School had 296 high school seniors projected to graduate in 2009. This research study's target population was seniors with an anticipated graduation date of March 2009. The entire population was surveyed, rather than a sample, since the population was available and easy to access. Thus, all of the seniors at AAA High School were given the opportunity to take the survey. The senior class was divided into seven class sections. The honors section (known as IV-6) had 36 students.

Institutional Review Board

Because the participants of this study were of minor age, parent/guardian consent with minor assent was required by the Institutional Review Board of the University of North Texas. Thus, informed consent forms and student assent forms were provided (see Appendix B). In order to participate in the survey, each student had to have both forms completed and submitted to survey administrators.

Survey Instrument

This study used a survey as the instrument of research for several reasons. First, according to McDonough (1997), research in college choice "has nearly exclusively been the domain of quantitative analysts" (p. 4). More recently, however, some researchers have opted for a mixed methodology, utilizing both quantitative and qualitative methods (Hossler, Schmit, & Vesper, 1999; Liu, 2005). Second, this method allowed the researcher to study a large sample in a relatively small amount of time (Gall et al., 2003, p. 222; Babbie, 1995, p. 273). Indeed, survey research "has yielded much valuable knowledge about opinions, attitudes, and practices" (Gall et al., 2003, p. 290).

The research instrument College Choice Survey for High School Seniors (see Appendix D) was developed by the researcher for this study, based on information from the literature review and her knowledge of the Philippines and of AAA High School. General categories were inferred from a literature review of college choice research. Three surveys (the College Board's sample "Admitted Student Questionnaire"; Rowe, 2002; Liu, 2005), which most closely approximated the intent of this study, were critically examined for factors that influence student college choice, as well as for survey

design considerations. Drawing on these, the researcher generated the items on the College Choice Survey for High School Seniors.

The answer options for the questions on class section (Question 39), ethnicity (Question 40), and high school grade average (Question 43) were developed in consultation with administrators of AAA High School. For Question 46 on socioeconomic status, the income categories answer options were derived from the "National Statistics Office, 2006 Family Income and Expenditure Survey" (*Philippines national statistics office*, 2008). Table 6 connects the major college choice factors (from United States research) with the questions in the instrument College Choice Survey for High School Seniors.

Table 6

College Choice Factors and Survey Questions

College choice factors	Survey questions
	STUDENT CHARACTERISTICS
Academic ability	43. What is your overall high school grade average?
	39. What is your class section?
Socioeconomic status	46. What was the approximate income (*in pesos*) of your parents/guardians last year?
Race/ethnicity	40. What is your race/ethnicity?
High school environment	
Educational aspirations/ expectations	37. What is the highest academic degree you plan to attain in your lifetime?

(*table continues*)

Table 6 (*continued*).

College choice factors	Survey questions
Gender	38. Gender
	INSTITUTIONAL CHARACTERISTICS
Academic quality	1. Quality of professors
	2. Good academic reputation
	5. Quality of major/s and courses I am interested in
	6. Quality of learning resources and facilities (library, computers, laboratories, etc.)
	7. Interaction between students and professors
	8. Focus on undergraduate education
Programs of study	3. Variety of majors and courses
	4. Offers the major(s) and courses I want
Cost and financial aid	9. Cost of attending college
	10. Room and board expenses
	11. Availability of scholarships/financial aid
	12. Availability of internship/co-op opportunities
	13. Availability of loans
Location	20. Convenient driving distance from home
	21. Quality of campus residence halls
	45. Where do you plan to live when attending college?

(*table continues*)

Table 6 (*continued*).

College choice factors	Survey questions
Social atmosphere	14. Variety of extracurricular activities (clubs, music, theater, etc.)
	15. Quality of social life/activities
	16. Being with my friends
	17. Opportunity to interact with students from different backgrounds
Future job opportunities	19. Future job opportunities
Religious emphasis	18. Christian (Protestant) environment
	41. Religion
	SIGNIFICANT OTHERS
Parents	23. Advice of parents/guardians
	24. Advice of father/male guardian
	25. Advice of mother/female guardian
	44. What is the highest level of education achieved by your parent/s/guardian/s?
Guidance counselors	26. Advice of guidance counselor/s
Friends	27. Advice of friends
	42. Among your close friends, how many plan to attend college?

(*table continues*)

Table 6 (*continued*).

College choice factors	Survey questions
	COLLEGE/UNIVERSITY SEARCH ACTIVITIES
College marketing	29. Visits by college admissions officers to GCHS
	30. College literature (catalogs, flyers, brochures, etc.)
	31. College website
	32. College DVDs/CD-ROMs/videos
	33. Campus visit
	34. Contact with college professors
	35. Contact with college alumni
	36. Contact with college students

The College Choice Survey for High School Seniors was designed to obtain the subjects' assessment of the relative importance of major college choice factors (as identified in United States research), as well as certain demographic data. The survey took around 20 minutes for the students to complete. Questions 1 to 36 were constructed using a 5-point Likert-type scale, in which students were asked to rate the importance of specific factors in their selection of a college, using the following scale: (5) *most important*, (4) *very important*, (3) *somewhat important*, (2) *little importance*, and (1) *not important*.

The survey was divided into six main sections with a total of 47 questions. The first section (Questions 1 to 22), entitled "College Traits Important to Me," requested the student to rate the importance of specific college traits in his/her selection of a college. These college traits were further subdivided into "Academics" (Questions 1 to 8),

"Financial Considerations" (Questions 9 to 13), "Extracurricular/Social Aspects" (Questions 14 to 17), and "Miscellaneous" (Questions 18 to 22). The second section (Questions 23 to 28), entitled "Opinions Important to Me," invited the student to rate the importance of the opinions of certain persons in his/her selection of a college. The third section (Questions 29 to 36), entitled "Information Sources Important to Me," elicited the student's assessment of the importance of certain information sources in his/her selection of a college. The fourth section included Question 37, which inquired concerning the student's level of academic aspirations. The fifth section (Questions 38 to 46), entitled "Demographics," asked the student to divulge certain demographic traits of themselves, including gender, race/ethnicity, religion, friends/peer influence, academic ability, parent's educational level, and socioeconomic status. The final section included Question 47, which was qualitative. This question was open-ended, as it invited the student to describe additional factors important to his/her college selection process that were not already addressed. The survey instrument was put into scantron format, in order to facilitate data analysis.

Validity and Reliability of the Survey Instrument

Survey Validity

In order to ensure the validity and clarity of the instrument, the researcher's dissertation committee, as well as a select group in the Philippines, were asked to evaluate the College Choice Survey for High School Seniors. This group was composed of two guidance counselors, two administrators, and two teachers – all associated with AAA High School. The pilot survey evaluation form (see Appendix C) was adapted from Bell's (2005) suggestions (pp. 147-148).

Several modifications to the survey instrument were made upon their recommendation. (1) The factor "Advice of pastor and/or religious adviser" (Question 28) was added as an option, although this was not a major factor in the United States college choice literature. Similarly, the factor "Secure/safe campus and environment" (Question 22) was added, based on feedback from the pilot student group's responses to the open-ended question. (2) To improve the instrument's clarity, survey Question 19 was reworded to "Future job opportunities" (from "Job placement after graduation"), and Question 40 to “What is your race/ethnicity?” (from "What is your ethnicity?"). (3) For the survey question "What is the highest academic degree you plan to attain in your lifetime?" (Question 37), the options for master's and doctoral degrees were included for clarity. Thus, the expert panel agreed on the face validity of this instrument.

Survey Reliability

Subsequently, in a pilot study, the survey was administered to 27 seniors of AAA High School. These were from one class section of the senior class population. (Note: The senior class section which participated in the pilot study was not given the actual survey later.) The pilot study procedures were the same as the procedures for the administration of the actual survey (i.e., completed informed consent and student assent forms required before the seniors could do the pilot study, proctor’s reading of instructions, incentives given upon completion of survey). Cronbach’s alpha coefficient was calculated to assess the reliability of the scores produced by the survey instrument. Huck (2000) writes,

> A third method for assessing internal consistency is referred to as coefficient alpha, as Cronbach’s alpha, or simply as alpha. . . . [A]lpha is more versatile

> because it can be used with instruments made up of items that can be scored with three or more possible values. Examples of such a situation include . . . a Likert-type questionnaire where the five response options for each statement extend from “strongly agree” to “strongly disagree” and are scored with the integers 5 through 1. (pp. 91-92)

For studies in the early stages of research, Nunnally and Bernstein (1994) contend that a reliability level of .70 is acceptable (pp. 264-265).

Cronbach’s Alpha for Pilot Survey

Institutional Characteristics was assessed using 21 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the Institutional Characteristics composite index was 0.817. Significant Others was assessed using 6 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the Significant Others composite index was 0.785. College/University Search Activities was assessed using 8 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the College/University Search Activities composite index was 0.893. The entire pilot survey was assessed using 35 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the entire pilot survey composite index was 0.881. Thus, the reliability of the pilot survey instrument scores was established.

Cronbach’s Alpha for Final Survey

Institutional Characteristics was assessed using 22 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the Institutional Characteristics composite index was 0.883. Significant Others was assessed using 6

items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the Significant Others composite index was 0.907. College/University Search Activities was assessed using 8 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the College/University Search Activities composite index was 0.916. The entire final survey was assessed using 36 items, each with a 5-point scale (1 = *not important* to 5 = *most important*). Cronbach's alpha for the entire final survey composite index was 0.933. Thus, the reliability of the final survey instrument scores was established.

Data Analysis

This study used both the descriptive and the correlational research designs in order to answer the research questions below.

RQ1: How do high school seniors in the Philippines, in the search and choice phases of their college selection process, evaluate the relative importance of major college choice factors (as identified in United States research)?

RQ2: Do the relative importance ascribed to these major college choice factors (i.e. academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere) vary when the survey population was disaggregated by students' demographic attributes (i.e. academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence)?

The first research question was answered using a descriptive research design. Thus, descriptive statistics were calculated for each college choice factor addressed in the survey using SPSS software. These statistics included the mean (a measure of central tendency) and the standard deviation (a measure of variability). The second research question was addressed by a correlational research design. Using SPSS software, ANOVAs (analyses of variance), Mann-Whitney *U* tests, and Kruskal-Wallis tests were run, in order to study the relationship between each of the major college choice factors and the students' demographic attributes.

The major college choice factors (i.e. dependent variables) were academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere. The pertinent demographic attributes of students (i.e. independent variables) were academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence.

While the initial 44 survey questions were quantitative, the 45th question was qualitative. The final open-ended question invited the student to describe additional factors important to his/her college selection process that were not already addressed. Answers to the 45th question were analyzed manually, as these were classified by common concepts.

CHAPTER 4

FINDINGS

Introduction

This chapter presents the demographic profile of student respondents and various aspects of data analysis (including missing values, the assumptions of ANOVA, and effect sizes). Then the two major research questions are addressed. For all statistical analyses, SPSS 16.0 software was used, and alpha set at 0.05.

The first purpose of this study was to describe the relative importance of major college choice factors (as identified in United States research) to high school seniors in the Philippines, who were in the search and choice phases of their college selection process. The second purpose was to determine whether there were statistically significant differences in the relative importance ascribed to these major college choice factors, according to demographic attributes of the students.

The major college choice factors (i.e. dependent variables) were academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere. The pertinent demographic attributes of students (i.e. independent variables) were academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence.

Demographic Profile of Students

Table E.1 (see Appendix E) displays the demographic characteristics of the high school students who participated in this study. The majority were Chinese (39.8%) or

Chinese & Filipino (47.8%), in non-honors class sections (86.7%), were B average students (64.6%), had aspirations to attend college (91.2%), had college-educated mothers (60.2%), were Protestant Christian (74.8%), and had all of their friends planning to attend college (94.7%). With respect to gender and father's educational level (whether or not they were college-educated), student response was around the same (44.2% males, 55.7% females; 41.2% had a non-college-educated father, 53.5% had a college-educated father). Regarding socioeconomic status, some 35% of respondents chose not to answer this question.

Missing Values in the Data Set

> Missing values are a common problem in statistics. According to He (2008),
>
> The seriousness depends on the pattern of missing information, how much is missing, and why it is missing (Graham, Cumsille, & Elek-Fisk, 2003). If less than 5% of data are missing in a random pattern from a large data set, the problems are less serious, and almost any procedure for handling missing values yields similar results. (p. 43)

In November 2008, 226 students from AAA High School took the College Choice Survey for High School Seniors. Of these, 203 surveys were entirely complete, while 23 surveys had 1-2 values missing at random. Thus, for this study, the missing values problem was less acute.

Mean substitution is a valid approach for dealing with missing values (Thompson, 2006, p. 50). Graham, Cumsille, and Elek-Fisk (2003) explain, “With this procedure, whenever a value is missing for one case on a particular variable, the mean for that variable, based on all non-missing cases, is used in place of the missing value” (p. 90).

In this study, the missing values for dependent variables were substituted with its mean. Four survey questions (corresponding to independent variables) had “I don’t know/Not applicable” as an answer option. (These were Questions 42, 44a, 44b, and 46.) Such responses were treated like missing values.

Research Questions Addressed

This study’s two research questions were addressed by descriptive and correlational research designs.

Research Question 1

How do high school seniors in the Philippines, in the search and choice phases of their college selection process, evaluate the relative importance of major college choice factors (as identified in United States research)?

The first research question was answered using a descriptive research design. For each college choice factor addressed in the survey, the mean (a measure of central tendency) and the standard deviation (a measure of variability) were calculated (N=226) using SPSS 16.0 software. Table 10 presents the mean and standard deviation of the college choice factors, by descending order of the mean. Thus, in their selection of a college, students placed more importance on the factors listed at the top of the table (e.g. future job opportunities, security, and programs of study), and less importance on the factors listed at the bottom (e.g. friends, guidance counselors). Moreover, college choice factors with larger standard deviations indicated more variability in student responses, when compared to college choice factors with smaller standard deviations.

Table 10

College Choice Factors: Mean and Standard Deviation

College choice factor	Mean	Standard deviation
Future Job Opportunities	4.7876	0.53252
Security	4.7257	0.60733
Programs of Study	4.5310	0.57265
Academic Quality	4.4333	0.45428
Religious Emphasis	4.2743	0.84061
Social Atmosphere	4.2301	0.64217
Parents	4.1504	0.83798
Location	4.0951	0.84644
Cost and Financial Aid	3.8372	0.79780
Pastor/Religious Adviser	3.7965	1.02119
College Marketing	3.6395	0.77283
Friends	3.5841	0.93548
Guidance Counselors	3.3894	1.01486

Research Question 2

Do the relative importance ascribed to these major college choice factors vary when the survey population was disaggregated by students' demographic attributes?

The second research question was answered using a correlational research design. Using SPSS 16.0 software, ANOVAs (analyses of variance) were run, in order to study the relationship between each of the major college choice factors and the students' demographic attributes. With ANOVA, according to Roberts (2004), there are

"[t]wo *or more* different groups measured on the same construct, typically on the same occasion" (e.g. School 1 vs. School 2 vs. School 3 vs. School 4). As Hinkle, Wiersma, and Jurs (2003) noted, "One-way ANOVA involves the analysis of one independent variable with two or more levels" (p. 333).

In this study, one-way ANOVAs were conducted for tests of statistical significance involving independent variables with two or more groups. If the ANOVA indicated statistical significance, a Tukey post-hoc test was run to investigate more specifically where the differences lie. Only the results of statistically significant ANOVAs (or Mann-Whitney *U* tests or Kruskal-Wallis tests, where appropriate) were reported.

The major college choice factors (i.e. dependent variables) were academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere. Table E.2 (see Appendix E) connects the college choice factors (dependent variables) with the questions in the instrument College Choice Survey for High School Seniors.

The pertinent demographic attributes of students (i.e. independent variables) were academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence. Table E.3 (see Appendix E) connects the demographic factors (independent variables) with the questions in the instrument College Choice Survey for High School Seniors.

Meeting the Assumptions of ANOVA

The three primary assumptions underlying the one-way ANOVA include (1) random and independent samples, (2) normal distribution of dependent variables, and (3) homogeneity of variance (i.e. equal variances of the population distributions) (Hinkle, Wiersma, & Jurs, 2003, pp. 344-345). Balanced design is a desirable condition when conducting an ANOVA.

Random and Independent Samples. Although each of AAA High School's 296 high school seniors had opportunity to participate in this study, 226 students actually took the survey – a 76% response rate. Seniors at AAA High School in the Philippines took the College Choice Survey for High School Seniors instrument independently and only one time. Hence, the assumption of independent sampling was met.

Normal Distribution of Dependent Variables. Kurtosis and skewness values of dependent variables were checked to determine if a distribution of scores was normal (Field, 2000, p. 39). According to Huck (2004), “skewness is not considered to be too extreme if the coefficient of skewness assumes a value anywhere between -1.0 and +1.0” (pp. 29-30). Moreover, skewness and kurtosis values in the range of -2.0 to +2.0 can also be acceptable (Brown, *Measures of Shape: Skewness and Kurtosis*, 2008). Leech and Onwuegbuzie (2002) noted that skewness and kurtosis coefficients outside the -2 to +2 range, but still within the -3 to +3 boundaries indicate a slight departure from normality (p. 9). Table 7 lists the selected college choice factors (dependent variables), whose skewness and kurtosis values were beyond the -1.0 to +1.0 range. Two factors (parents and religious emphasis) had values acceptable at the -2.0 to +2.0

range. However, four factors (future job opportunities, programs of study, security, and social atmosphere) had values still unacceptable at the -2.0 to +2.0 range.

Table 7

Selected College Choice Factors (Dependent Variables): Skewness and Kurtosis

College choice factor	Skewness	Kurtosis
Acceptable at -2 to +2 range		
Parents	-1.184	1.853
Religious emphasis	-1.234	1.844
Still unacceptable at -2 to +2 range		
Future job opportunities	-3.361	15.130
Programs of study	-1.716	5.713
Security	-3.023	12.376
Social atmosphere	-1.128	2.333

According to Huck (2004),

> If a data set is found to be grossly nonnormal, . . . the data can be “normalized” by means of a formula that revises the value of each score such that the revised data set represents a closer approximation to the normal. (p. 30)

The four factors which had values unacceptable at the -2.0 to +2.0 range—future job opportunities, programs of study, security, and social atmosphere—underwent appropriate data transformations (Tabachnick and Fidell, 2007, pp. 86-89). The data were transformed because they did not represent a normal distribution. Subsequently, there are limitations since the data was not naturally in a normal curve. Table 8 presents the skewness and kurtosis values of these factors—before and after data

transformation. Although the post-transformation skewness and kurtosis values of the future job opportunities factor, and the kurtosis value of the security factor, were still out-of-range, the resulting distributions were nevertheless *more normal* than previous to undergoing data transformation.

Table 8

Skewness and Kurtosis: Before and After Data Transformation

College choice factor	Skewness (before data transformation)	Skewness (after data transformation)	Kurtosis (before data transformation)	Kurtosis (after data transformation)
Future job opportunities	-3.361	2.194	15.130	4.173
Programs of study	-1.716	0.658	5.713	-0.391
Security	-3.023	1.841	12.376	2.621
Social atmosphere	-1.128	0.560	2.333	0.395

Homogeneity of Variance. Most of the ANOVAs met the homogeneity of variance assumption, examined using Levene's test ($\alpha = .05$). A handful met the assumption at $\alpha = .01$. In either case, eta-square (η^2) effect sizes were calculated. If the homogeneity of variance assumption was still not met at the $\alpha = .01$ level, alternate statistical tests were used, depending on the number of levels in the independent variable. In the instances where the independent variable had two levels (e.g. gender), Mann-Whitney *U* tests were run, and an effect size (r^2) was calculated (Clark-Carter, 1997, p. 226, 445). Hinkle, Wiersma, and Jurs (2003) write,

> the Mann-Whitney *U* test is statistically more powerful and has been shown to be the better alternative to the two-sample *t* test for independent means. Since it is

more sensitive and thus more likely to lead to the rejection of the null hypothesis when it is false, the authors recommend the use of the Mann-Whitney *U* test when the assumptions underlying the *t* test (normality and homogeneity of variance) cannot be adequately met. (p. 576)

In the instances where the independent variable had more than two levels (e.g. overall high school average), then the Kruskal-Wallis test was run (Hinkle, Wiersma, & Jurs, 2003, p. 577-579). All of the one-way ANOVAs met the homogeneity assumption, except three ANOVAs, namely religious emphasis by academic ability (honors vs. non-honors), security by academic ability (honors vs. non-honors), and future job opportunities by gender.

Balanced Design. Balanced design is a desirable condition when conducting an ANOVA (Cobb, 1998, p. 151). According to Roberts (2004), this essentially requires that an equal number of subjects be present in each level of the independent variable used in the analysis. Balanced design allows for a more robust analysis with regard to the assumptions of ANOVA (Hinkle, Wiersma, & Jurs, 2003, p. 346). When balanced design was violated in this study, the following steps were taken:

Recategorization. In several instances, recategorizing the levels of the independent variable yielded more meaningful results, in the context of this study. Such was the case for survey Question 37 (relating to the student's educational aspirations/expectations) when the answers were recategorized as college-bound and non-college-bound. Similarly, the answers for Questions 44a and 44b (relating to father's and mother's educational level) were recategorized as college-educated and non-college-educated. Finally, since class section IV-6 was the honors class (and IV-1

to IV-5 were non-honors), it was logical to recategorize the answers to survey Question 39 as honors and non-honors.

Focus on Specific Levels. In two instances, this study narrowed the statistical significance test to focus on two levels, due to lack of number of participants for the other levels. This study focused on the difference between "Protestant Christian" and "Catholic Christian" (for the "religion" variable), and on the difference between "Chinese" and "Chinese & Filipino" (for the "race/ethnicity" variable).

Random Sampling. In several instances, a random sample of the larger level was taken, which resulted in a more balanced design (Hinkle, Wiersma, & Jurs, 2003, p. 346; Cobb, 1998, p. 151). This was done for survey Questions 37 (relating to student's educational aspirations/expectations), 41 (religion), 39 (academic ability as measured by being in honors versus non-honors class section), and 43 (academic ability as measured by overall high school average).

Effect Sizes Used

Two types of effect-size measures were calculated: eta-square η^2 (for ANOVAs) and r^2 (for Mann-Whitney U tests). While Cohen (1988) presented benchmarks for effect-size magnitudes, he did not expect these to be rigidly applied, but instead taken into account in the research-specific context. Nevertheless, when context-specific effect size standards are not present in the literature, Cohen's (1988) benchmarks are considered a reference point. Table 9 gives Cohen's (1988) benchmarks for effect size magnitudes (Cohen, 1988, pp. 24-26, 79; Henson, 2006, p. 617), which scale this study will follow.

Table 9

Cohen's (1988) Benchmarks for Effect Size Magnitudes

Effect size magnitudes	Effect size measures	
	η^2	r^2
Small	0.01	0.01
Medium	0.09	0.09
Large	0.25	0.25

Research Question 2.1

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Statistically significant differences were found for 12 out of the 13 college choice factors, when the survey population was disaggregated by students' academic ability, as distinguished by being in honors (*n* = 29) versus non-honors (*n* = 28) class sections. These factors included academic quality, programs of study, cost and financial aid, location, social atmosphere, religious emphasis, security, parents, guidance counselors, friends, pastor/religious adviser, and college marketing.

Research Question 2.1.1

Is there a statistically significant difference in the relative importance ascribed to academic quality, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 11 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and academic quality, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .022$) between the honors class section ($M = 4.4023$) and the non-honors class section ($M = 4.6102$) in relation to the perceived importance of academic quality at the .05 significance level. The effect size (η^2) of .091, is considered medium (Cohen, 1988).

Table 11

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Academic Quality

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	0.616	1	.616	5.516*	.022	.091
Within	6.139	55	.112			
Total	6.755	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.2

Is there a statistically significant difference in the relative importance ascribed to programs of study, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 12 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and programs of study, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .004$) between the honors class section ($M = 4.3966$) and the non-honors class section ($M = 4.7679$) in relation to the perceived importance of programs of study at the .05 significance level. The effect size (η^2) of .138, is considered medium-to-large (Cohen, 1988).

Table 12

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Programs of Study

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	.164	1	.164	8.805*	.004	.138
Within	1.026	55	.019			
Total	1.190	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.3

Is there a statistically significant difference in the relative importance ascribed to cost and financial aid, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 13 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and cost and financial aid, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .024$) between the honors class section ($M = 3.5103$) and the non-honors class section ($M = 3.9643$) in relation to the perceived importance of cost and financial aid at the .05 significance level. The effect size (η^2) of .089, is considered medium (Cohen, 1988).

Table 13

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Cost and Financial Aid

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	2.935	1	2.935	5.387*	.024	.089
Within	29.971	55	.545			
Total	32.907	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.4

Is there a statistically significant difference in the relative importance ascribed to location, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 14 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and location, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .011$) between the honors class section ($M = 3.6034$) and the non-honors class section ($M = 4.2143$) in relation to the perceived importance of location at the .05 significance level. The effect size (η^2) of .113, is considered medium-to-large (Cohen, 1988).

Table 14

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Location

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	5.315	1	5.315	6.977*	.011	.113
Within	41.904	55	.762			
Total	47.219	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.5

Is there a statistically significant difference in the relative importance ascribed to social atmosphere, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 15 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and social atmosphere, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .002$) between the honors class section ($M = 3.8966$) and the non-honors class section ($M = 4.4107$) in relation to the perceived importance of social atmosphere at the .05 significance level. The effect size (η^2) of .163, is considered medium-to-large (Cohen, 1988).

Table 15

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Social Atmosphere

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	.523	1	.523	10.678*	.002	.163
Within	2.692	55	.049			
Total	3.214	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.6

Is there a statistically significant difference in the relative importance ascribed to religious emphasis, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

The results of the Mann-Whitney U test for academic ability (as distinguished by being in honors versus non-honors class section) and religious emphasis, with n_{honors} = 29 and $n_{non\text{-}honors}$ =28, indicate that there was a statistically significant difference (z = -2.441, p = .015) between non-honors students (mean rank = 33.95) and honors students (mean rank = 24.22) in relation to the perceived importance of religious emphasis at the .05 significance level. The effect size (r^2) of .104, is considered medium-to-large (Cohen, 1988).

Research Question 2.1.7

Is there a statistically significant difference in the relative importance ascribed to security, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

The results of the Mann-Whitney U test for academic ability (as distinguished by being in honors versus non-honors class section) and security, with n_{honors} = 29 and $n_{non\text{-}honors}$ =28, indicate that there was a statistically significant difference (z = -2.524, p = .012) between non-honors students (mean rank = 33.34) and honors students (mean rank = 24.81) in relation to the perceived importance of security at the .05 significance level. The effect size (r^2) of .112, is considered medium-to-large (Cohen, 1988).

Research Question 2.1.8

Is there a statistically significant difference in the relative importance ascribed to parents, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 16 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and parents, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .031$) between the honors class section ($M = 3.7701$) and the non-honors class ($M = 4.3095$) section in relation to the perceived importance of parents at the .05 significance level. The effect size (η^2) of .082, is considered small-to-medium (Cohen, 1988).

Table 16

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Parents

Source	*SS*	*df*	*MS*	*F*	*P*	η^2
Between	4.145	1	4.145	4.908*	.031	.082
Within	46.452	55	.845			
Total	50.596	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.9

Is there a statistically significant difference in the relative importance ascribed to guidance counselors, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 17 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and guidance counselors, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .000$) between the honors class section ($M = 2.9310$) and the non-honors class section ($M = 3.8929$) in relation to the perceived importance of guidance counselors at the .05 significance level. The effect size (η^2) of .221, is considered medium-to-large (Cohen, 1988).

Table 17

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Guidance Counselors

Source	*SS*	*df*	*MS*	*F*	*P*	η^2
Between	13.179	1	13.179	15.574**	.000	.221
Within	46.541	55	.846			
Total	59.719	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.10

Is there a statistically significant difference in the relative importance ascribed to friends, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 18 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and friends, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .011$) between the honors class section ($M = 3.0690$) and the non-honors class section ($M = 3.7500$) in relation to the perceived importance of friends at the .05 significance level. The effect size (η^2) of .111, is considered medium-to-large (Cohen, 1988).

Table 18

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Friends

Source	*SS*	*df*	*MS*	*F*	*P*	η^2
Between	6.607	1	6.607	6.842*	.011	.111
Within	53.112	55	.966			
Total	59.719	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.11

Is there a statistically significant difference in the relative importance ascribed to pastor/religious adviser, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 19 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and pastor/religious adviser, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .000$) between the honors class section ($M = 3.3448$) and the non-honors class section ($M = 4.3571$) in relation to the perceived importance of pastor/religious adviser at the .05 significance level. The effect size (η^2) of .263, is considered large (Cohen, 1988).

Table 19

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and Pastor/Religious Adviser

Source	*SS*	*df*	*MS*	*F*	*P*	η^2
Between	14.599	1	14.599	19.593**	.000	.263
Within	40.980	55	.745			
Total	55.579	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.1.12

Is there a statistically significant difference in the relative importance ascribed to college marketing, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Table 20 presents the results of the one-way ANOVA for academic ability (honors vs. non-honors) and college marketing, with $n_{honors} = 29$ and $n_{non\text{-}honors} = 28$. These findings indicate that there was a statistically significant difference ($p = .004$) between the honors class section ($M = 3.2845$) and the non-honors class section ($M = 3.8705$) in relation to the perceived importance of college marketing at the .05 significance level. The effect size (η^2) of .139, is considered medium-to-large (Cohen, 1988).

Table 20

Analysis of Variance for Academic Ability (Honors vs. Non-Honors) and College Marketing

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	4.893	1	4.893	8.847*	.004	.139
Within	30.418	55	.553			
Total	35.311	56				

Note. *$p < .05$. **$p < .001$.

Research Question 2.2

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Statistically significant differences were found for 4 out of the 13 college choice factors, when the survey population was disaggregated by students' academic ability (as seen in self-reported overall high school average), with $n_{\text{A average}} = 58$, $n_{\text{B average}} = 59$, and $n_{\text{C average}} = 22$. These factors included social atmosphere, religious emphasis, friends, and pastor/religious adviser.

Research Question 2.2.1

Is there a statistically significant difference in the relative importance ascribed to social atmosphere, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Table 21 presents the results of the one-way ANOVA for academic ability (as seen in self-reported overall high school average) and social atmosphere, with $n_{\text{A average}} = 58$, $n_{\text{B average}} = 59$, and $n_{\text{C average}} = 22$. These findings indicate that there was a statistically significant difference ($p = .019$) among the A, B, and C average students in relation to the perceived importance of social atmosphere at the .05 significance level. The effect size (η^2) of .057, is considered small-to-medium (Cohen, 1988). A follow-up Tukey post hoc test revealed that the score of the B average students ($M = 4.3136$) was statistically significantly higher than those of A average students ($M = 3.9871$, $p = .015$). (The mean of the C average students was 4.1932.)

Table 21

Analysis of Variance for Academic Ability (Overall High School Average) and Social Atmosphere

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	.455	2	.227	4.076*	.019	.057
Within	7.586	136	.056			
Total	8.041	138				

Note. *$p < .05$. **$p < .001$.

Research Question 2.2.2

Is there a statistically significant difference in the relative importance ascribed to religious emphasis, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Table 22 presents the results of the one-way ANOVA for academic ability (as seen in self-reported overall high school average) and religious emphasis, with $n_{\text{A average}} = 58$, $n_{\text{B average}} = 59$, and $n_{\text{C average}} = 22$. These findings indicate that there was a statistically significant difference ($p = .018$) among the A, B, and C average students in relation to the perceived importance of religious emphasis at the .05 significance level. The effect size (η^2) of .057, is considered small-to-medium (Cohen, 1988). A follow-up Tukey post hoc test revealed that the score of the A average students ($M = 4.0690$) was statistically significantly lower than those of B average students ($M = 4.4576$, $p = .029$). (The mean of C average students was 4.5000.)

Table 22

Analysis of Variance for Academic Ability (Overall High School Average) and Religious Emphasis

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	5.441	2	2.721	4.117*	.018	.057
Within	89.868	136	.661			
Total	95.309	138				

Note. *$p < .05$. **$p < .001$.

Research Question 2.2.3

Is there a statistically significant difference in the relative importance ascribed to friends, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Table 23 presents the results of the one-way ANOVA for academic ability (as seen in self-reported overall high school average) and friends, with $n_{\text{A average}} = 58$, $n_{\text{B average}} = 59$, and $n_{\text{C average}} = 22$. These findings indicate that there was a statistically significant difference ($p = .006$) among the A, B, and C average students in relation to the perceived importance of friends at the .05 significance level. The effect size (η^2) of .073, is considered small-to-medium (Cohen, 1988). A follow-up Tukey post hoc test revealed that the score of the C average students ($M = 4.0455$) was statistically significantly higher than those of A average students ($M = 3.2931$, $p = .004$). (The mean of B average students was 3.5424.)

Table 23

Analysis of Variance for Academic Ability (Overall High School Average) and Friends

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	9.089	2	4.545	5.346*	.006	.073
Within	115.616	136	.850			
Total	124.705	138				

Note. *$p < .05$. **$p < .001$.

Research Question 2.2.4

Is there a statistically significant difference in the relative importance ascribed to pastor/religious adviser, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Table 24 presents the results of the one-way ANOVA for academic ability (as seen in self-reported overall high school average) and pastor/religious adviser, with $n_{\text{A average}} = 58$, $n_{\text{B average}} = 59$, and $n_{\text{C average}} = 22$. These findings indicate that there was a statistically significant difference ($p = .027$) among the A, B, and C average students in relation to the perceived importance of pastor/religious adviser at the .05 significance level. The effect size (η^2) of .052, is considered small-to-medium (Cohen, 1988). A follow-up Tukey post hoc test revealed that the score of the B average students ($M = 3.9661$) was statistically significantly higher than those of A average students ($M = 3.5172$, $p = .047$). (The mean of C average students was 4.0455.)

Table 24

Analysis of Variance for Academic Ability (Overall High School Average) and Pastor/Religious Adviser

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	7.580	2	3.790	3.698*	.027	.052
Within	139.370	136	1.025			
Total	146.950	138				

Note. *$p < .05$. **$p < .001$.

Research Question 2.3

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' socioeconomic status?

In answering survey Question 46 ("What was the approximate income (in pesos) of your parents/guardians last year?"), which relates to students' socioeconomic status, 79 out of 226 students (or 35% of survey respondents) chose the option "I prefer not to answer this question/I don't know." This response precludes analysis of the data.

Research Question 2.4

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' gender?

Statistically significant differences were found for 2 out of the 13 college choice factors, when the survey population was disaggregated by students' gender, with n_{male}

= 100 and n_{female} = 126. These factors included college marketing and future job opportunities.

Research Question 2.4.1

Is there a statistically significant difference in the relative importance ascribed to college marketing, when the survey population was disaggregated by students' gender?

Table 25 presents the results of the one-way ANOVA for gender and college marketing, with n_{male} = 100 and n_{female} = 126. These findings indicate that there was a statistically significant difference (p = .022) between male students (M = 3.5081) and female students (M = 3.7438) in relation to the perceived importance of college marketing at the .05 significance level. The effect size (η^2) of .023, is considered small-to-medium (Cohen, 1988).

Table 25

Analysis of Variance for Gender and College Marketing

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	3.099	1	3.099	5.287*	.022	.023
Within	131.285	224	.586			
Total	134.384	225				

Note. *p < .05. **p < .001.

Research Question 2.4.2

Is there a statistically significant difference in the relative importance ascribed to future job opportunities, when the survey population was disaggregated by students' gender?

The results of the Mann-Whitney U test for gender and future job opportunities, with n_{male} = 100 and n_{female} = 126, indicate that there was a statistically significant difference (z = -2.061, p = .039) between male students (mean rank = 106.90) and female students (mean rank = 118.74) in relation to the perceived importance of future job opportunities at the .05 significance level. The effect size (r^2) of .019, is considered small (Cohen, 1988).

Research Question 2.5

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' educational aspirations/expectations?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' educational aspirations/expectations, with $n_{non\text{-}college\text{-}bound}$ = 20 and $n_{college\text{-}bound}$ = 21. This factor was programs of study.

Research Question 2.5.1

Is there a statistically significant difference in the relative importance ascribed to programs of study, when the survey population was disaggregated by students' educational aspirations/expectations?

Table 26 presents the results of the one-way ANOVA for educational aspirations/expectations and programs of study, with $n_{non\text{-}college\text{-}bound}$ = 20 and $n_{college\text{-}bound}$ = 21. These findings indicate that there was a statistically significant difference (p = .032) between college-bound students (M = 4.6429) and non-college-bound students (M = 4.25) in relation to the perceived importance of programs of study at the .05

significance level. The effect size (η^2) of .113, is considered medium-to-large (Cohen, 1988).

Table 26

Analysis of Variance for Educational Aspirations/Expectations and Programs of Study

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	.109	1	.109	4.966*	.032	.113
Within	.854	39	.022			
Total	.963	40				

Note. *$p < .05$. **$p < .001$.

Research Question 2.6

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' race/ethnicity?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' race/ethnicity, with $n_{\text{Chinese}} = 90$, $n_{\text{Chinese \& Filipino}} = 108$. This factor was cost and financial aid.

Research Question 2.6.1

Is there a statistically significant difference in the relative importance ascribed to cost and financial aid, when the survey population was disaggregated by students' race/ethnicity?

Table 27 presents the results of the one-way ANOVA for race/ethnicity and cost and financial aid, with $n_{\text{Chinese}} = 90$, $n_{\text{Chinese \& Filipino}} = 108$. These findings indicate that there was a statistically significant difference ($p = .011$) between Chinese ($M = 3.6689$)

and Chinese & Filipino (*M* = 3.9648) in relation to the perceived importance of cost and financial aid at the .05 significance level. The effect size (η^2) of .033, is considered small-to-medium (Cohen, 1988).

Table 27

Analysis of Variance for Race/Ethnicity and Cost and Financial Aid

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	4.299	1	4.299	6.666*	.011	.033
Within	126.399	196	.645			
Total	130.698	197				

Note. *$p < .05$. **$p < .001$.

Research Question 2.7

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' father's educational level?

No statistically significant difference was found for any of the 13 college choice factors, when the survey population was disaggregated by students' father's educational level, with $n_{\text{non-college-educated father}} = 93$ and $n_{\text{college-educated father}} = 121$.

Research Question 2.8

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' mother's educational level?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' mother's

educational level, with $n_{\text{non-college-educated mother}} = 73$ and $n_{\text{college-educated mother}} = 136$. This factor was social atmosphere.

Research Question 2.8.1

Is there a statistically significant difference in the relative importance ascribed to social atmosphere, when the survey population was disaggregated by students' mother's educational level?

Table 28 presents the results of the one-way ANOVA for mother's educational level and social atmosphere, with $n_{\text{non-college-educated mother}} = 73$ and $n_{\text{college-educated mother}} = 136$. These findings indicate that there was a statistically significant difference ($p = .032$) between students with college-educated mothers ($M = 4.1415$) and students with non-college-educated mothers ($M = 4.3493$) in relation to the perceived importance of social atmosphere at the .05 significance level. The effect size (η^2) of .022, is considered small-to-medium (Cohen, 1988).

Table 28

Analysis of Variance for Mother's Educational Level and Social Atmosphere

Source	*SS*	*df*	*MS*	*F*	*p*	η^2
Between	.254	1	.254	4.649*	.032	.022
Within	11.298	207	.055			
Total	11.552	208				

Note. *$p < .05$. **$p < .001$.

Research Question 2.9

Is there a statistically significant difference in the relative importance ascribed to the college choice factor of religious emphasis, when the survey population was disaggregated by students' religion?

No statistically significant difference was found for the college choice factor of religious emphasis, when the survey population was disaggregated by students' religion, $n_{\text{Protestant Christian}} = 43$ and $n_{\text{Catholic Christian}} = 40$.

Research Question 2.10

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' friends/peer influence?

One-way ANOVAs could not be conducted, because the condition of balanced design was not met. Furthermore, it is not worthwhile to do group comparisons, because over 95% of respondents answered that "all" of their close friends were planning to attend college. Table 29 displays the distribution of responses to survey Question 42 ("Among your close friends, how many plan to attend college?"), which related to students' friends/peer influence.

Table 29

Responses to Survey Question 42.
"Among your close friends, how many plan to attend college?"

Answer options	*n*
All	214
Most	4
Some	3
Very few	2
None	1

Additional Findings

Table 30 displays responses to survey Question 45 ("Where do you plan to live when attending college?"). Most of the students indicated they planned to live at home.

Table 30

Responses to Survey Question 45.
"Where do you plan to live when attending college?"

	n
Home	206
Campus Residence Hall	6
Apartment	10
Other	1
Missing	3

Many of the responses to survey Question 47 (open-ended) overlapped existing survey questions. The findings are summarized in Chapter 5.

CHAPTER 5

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

Summary and Discussion of Findings

Introduction

The purposes of this nonexperimental, quantitative study were (1) to describe the relative importance of major college choice factors (as identified in U.S. research) to Philippine high school seniors, in the search-choice phase of college selection, and (2) to determine whether there were statistically significant differences in the relative importance ascribed to these factors, according to students' demographic attributes. This study addressed two research questions—the first with a descriptive research design, and the second with a correlational research design. The survey instrument College Choice Survey for High School Seniors, developed by the researcher, was utilized to gather data. Cronbach's alpha for the survey composite index was 0.933, thus establishing the reliability of the instrument's scores. Participants included 226 fourth-year Philippine high school students. Their demographic characteristics are displayed in Table E.1 (see Appendix E).

For all statistical analyses, SPSS 16.0 software was used. To answer the first research question, the mean and standard deviation were calculated for each college choice factor addressed in the survey. To address the second research question, ANOVAs, Mann-Whitney *U* tests, and Kruskal-Wallis tests were run, in order to study the relationship between each of the major college choice factors and the students' demographic attributes. The major college choice factors (i.e. dependent variables)

were academic quality, college marketing, cost and financial aid, friends, guidance counselors, future job opportunities, location, parents, pastor/religious adviser, programs of study, religious emphasis, security, and social atmosphere. The pertinent demographic attributes of students (i.e. independent variables) were academic ability, socioeconomic status, gender, educational aspirations/expectations, race/ethnicity, father's educational level, mother's educational level, religion, and friends/peer influence. A summary of major research findings and relevant discussion follow.

Research Question 1

How do high school seniors in the Philippines, in the search and choice phases of their college selection process, evaluate the relative importance of major college choice factors (as identified in United States research)?

The college choice factors, rated by students on a 1 to 5 scale (1 = *not important* to 5 = *most important*), are arranged by descending order of importance: future job opportunities (4.79), security (4.73), programs of study (4.53), academic quality (4.43), religious emphasis (4.27), social atmosphere (4.23), parents (4.15), location (4.10), cost and financial aid (3.84), pastor/religious adviser (3.80), college marketing (3.64), friends (3.58), and guidance counselors (3.39).

All of the major college choice factors surfaced in U.S. literature were important, to some degree, in the Philippine context. However, students placed more importance on some factors (e.g. future job opportunities, programs of study) than on others (e.g. friends, guidance counselors). Thus, overall, the findings correspond to current United States college choice research.

That the “cost and financial aid” factor was not ranked more highly in importance was somewhat surprising, considering that this was a top factor in U.S. college choice research (Paulsen, 1990, pp. 47-48; Broekemier, 2002, p. 34; Cabrera and La Nasa, 2000, pp. 9-10). This may be partly explained by the upper-middle class backgrounds of the students. Paulsen (1990) writes, “College becomes less attractive to students when tuition expenses, room and board expenses, and distance from home increase. However, . . . [a]t higher levels of student income and aptitude, these effects become less important” (pp. 27-28).

That students ranked their “parents” higher than other people (e.g. pastor/religious adviser, friends, guidance counselor) coheres with U.S. research. After reviewing previous studies (The Carnegie Foundation, 1986; Dixon and Martin, 1991; Flint, 1992), Mansfield and Warwick (2005) noted that these “all report[ed] high school seniors identify[ing] parents as primary influencers in college choice decisions and the most influential people in helping them select a college” (pp. 50-51).

The low ranking of guidance counselors in this study seems to differ from U.S. college choice research, in which these people are identified among the factors “consistently influential” in the search and choice phases of students’ college choice process (McDonough, 1997, p. 4). Nevertheless, even in U.S. literature, there is some evidence that points to the “declining influence of the high school counselor in the college choice process of seniors” (Rowe, 2002, pp. 50-51).

Three factors (security, religious emphasis, and pastor/religious adviser), although not considered major in the U.S. literature, were added based on feedback from the pilot studies. That students ranked “security” as second in importance may be

due to the increased kidnapping threat in this third world country. That students ranked "religious emphasis" and "pastor/religious adviser" highly may be attributed, in part, to the religious nature of the high school.

Research Question 2

Do the relative importance ascribed to these major college choice factors vary when the survey population was disaggregated by students' demographic attributes?

Research Question 2.1

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as distinguished by being in honors versus non-honors class section)?

Statistically significant differences were found for 12 out of the 13 college choice factors, when the survey population was disaggregated by students' academic ability, as distinguished by being in honors versus non-honors class sections. These factors included academic quality, programs of study, cost and financial aid, location, social atmosphere, religious emphasis, security, parents, guidance counselors, friends, pastor/religious adviser, and college marketing. Interestingly, for each of these factors, the score of the non-honors students was statistically significantly higher than the score of the honors students.

The "pastor/religious adviser" factor had a large effect size; 26.3% of the variability in the relative importance attributed to the "pastor/religious adviser" can be explained by students' academic ability (honors vs. non-honors class section). Moreover, eight college choice factors had medium-to-large effect sizes: 22.1% of the

variability in the relative importance attributed to “guidance counselors” can be explained by students’ academic ability (honors vs. non-honors class section); 16.3% for “social atmosphere,” 13.9% for “college marketing,” 13.8% for “programs of study,” 11.3% for “location,” 11.2% for “security,” 11.1% for “friends,” and 10.4% for “religious emphasis.”

That non-honors students rated the importance of the “location” and “cost and financial aid” factors higher than did the honors students correlates with U.S. research. Avery and Hoxby (2004) found that, in general, “high-aptitude students are nearly indifferent to a college’s distance from their home, to whether it is in-state, and to whether it is public” (p. 288). Hossler (2000) observed that “it typically requires larger scholarships to influence the enrollment decisions of high-ability students.” (pp. 81-82).

However, the finding that non-honors students rated the importance of the “academic quality” and “programs of study” factors higher than did the honors students diverges from U.S. research. According to Paulsen (1990), “[t]he higher the academic ability of a student, the greater the concern about academic standards, program offerings” (p. 50). Hossler (2000) concurred, concluding that high-ability students are “more likely to be interested in institutions with higher levels of prestige and greater selectivity” (pp. 81-82).

Research Question 2.2

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' academic ability (as seen in overall high school average)?

Statistically significant differences were found for 4 out of the 13 college choice factors, when the survey population was disaggregated by students' academic ability (as seen in self-reported overall high school average). These factors included social atmosphere, religious emphasis, friends, and pastor/religious adviser. The effect sizes for these were small-to-medium.

The findings that B average students rated the importance of "social atmosphere" higher than their A average counterparts, and that C average students rated the importance of "friends" higher than A average students, coheres with stereotypes about high-ability students placing less emphasis on social aspects. However, this researcher did not find much in U.S. college choice literature to support or disprove these findings. Interestingly, the B average students rated the importance of the "religious emphasis" and "pastor/religious adviser" factors higher than their A average counterparts. Again, U.S. college choice research does not relate much to these findings.

Research Question 2.3

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' socioeconomic status?

Although socioeconomic status is a major demographic attribute in U.S. college choice literature, analysis of the Philippine data was precluded, due to the fact that, in

answering the socioeconomic status question, 79 out of 226 students (or 35% of survey respondents) chose the option “I prefer not to answer this question/I don’t know.” Nevertheless, we know that, in general, clientele of AAA High School were from upper-middle class families. Moreover, around 12-15% of the student population received scholarships; the vast majority of these were need-based, rather than merit-based.

A counselor from AAA High School attributed this non-response on the survey question to two possibilities. First, due to the increase in kidnappings nationwide (especially of persons of Chinese ethnicity), parents have instructed their children not to disclose such information. Second, as many parents put their primary focus on their business, and let maids (called *yayas*) take care of their children, it is possible that the students do not know their family’s socioeconomic status.

This non-response on the socioeconomic status question suggests a weakness in this study, namely, the sole use of the survey method to gather information. Perhaps supplementing this with personal or group interviews, with parents as well as students, may provide more insights. Determining parental occupations, and then using general data about income for those careers as a rough estimate of the socioeconomic status, might have been another option. In regard to the *method* of collecting college choice information, following the majority of U.S. college choice literature in using only the survey method, does not yield the same amount of data in the Philippines. For this socioeconomic status question, the differences between a prosperous, relatively secure country (i.e. the United States of America) and a under-developed country beset by internal security threats (i.e. the Philippines) come into play.

Research Question 2.4

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' gender?

Statistically significant differences were found for 2 out of the 13 college choice factors, when the survey population was disaggregated by students' gender. These factors included college marketing and future job opportunities, which had, respectively, small-to-medium and small effect sizes. Interestingly, female students rated the relative importance of 12 (out of 13) college choice factors higher than did male students. The exception was the "friends" factors, for which male students rated its importance higher than did their female counterparts.

Although not a one-to-one correspondence, these findings were similar to those of Mansfield and Warwick (2005), who surveyed seniors from eight private, religiously affiliated schools from five states, evaluating the gender differences between students as to how they rated the level of importance of 19 college selection criteria. Similar to this study's results, Mansfield and Warwick (2005) did not find statistically significant differences between male and female students for most of their college selection criteria. However, they found that female students had higher importance levels attributed to most college selection criteria than did their male counterparts.

Research Question 2.5

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' educational aspirations/expectations?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' educational aspirations/expectations. This factor was programs of study, and it had a medium-to-large effect size. 11.3% of the variability in the relative importance attributed to "programs of study" can be explained by students' educational aspirations/expectations (i.e. whether or not they were college-bound). Although this researcher has not found much in U.S. research which pertains to this combination (i.e. educational aspirations/expectations with programs of study), it seems reasonable that college-bound students would place a higher importance on the programs of study offered by an institution, than their non-college-bound counterparts.

Research Question 2.6

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' race/ethnicity?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' race/ethnicity. Students of Chinese-Filipino ethnicity rated the importance of the "cost and financial aid" factor statistically significantly higher than students of Chinese ethnicity. The effect size is small-to-medium. (The information for students of Filipino ethnicity was not used, due

to low numbers.) In reviewing the findings, a counselor from AAA High School suggested that students may have been confused by the race/ethnicity classifications, as the distinction between “Chinese” and “Chinese & Filipino” is somewhat blurry. This weak classification probably led to a distortion in findings. United States college choice research specifically relating to Asian American subgroups is somewhat sparse, as Teranishi, Ceja, Antonio, Allen, and McDonough (2004) note,

> While there exists a limited amount of research on the educational experiences of Asian Americans as a whole, even less is known about the educational experiences of ethnic subgroups within the population . . . . Rather, the Asian American population has been misrepresented through being categorized and treated as a single, homogeneous racial group. (p. 528)

Research Question 2.7

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students’ father’s educational level?

No statistically significant difference was found for any of the 13 college choice factors, when the survey population was disaggregated by students’ father's educational level. Interestingly, however, students with non-college-educated fathers rated all 13 college choice factors higher than did students with college-educated fathers.

These findings contradict U.S. research, both in the number of statistically significant differences, as well as the direction of these differences. Paulsen (1990) found that U.S. students with parents of higher educational attainment “are more likely to emphasize the importance of programs and high academic standards, and less likely

to show concern about costs" (pp. 48-49). Moreover, these students "tend to rely more on their parents for information and less on high school counselors" and "are more inclined to use commercial guidebooks, campus visits, admissions officers, and alumni," while students with parents of lower educational attainment "depend more on the advice of high school counselors and unrequested publications" (Paulsen, 1990, p. 54).

Perhaps this discrepancy between U.S. and Philippine findings may be partly explained by the milieu of the Philippines, and specifically that of AAA High School. Roses (1988) explains that, in this Southeast Asian country, the common man seems to have a strong attraction to tertiary education; so engrained is this in the Filipino psyche that a father is willing to sell his last piece of land, his work animal, just to be able to see his son through college (p. 44). The attainment of a diploma is valued, whether or not one gets a job with it (Gonzalez, 1987, p. 41). On the other hand, there is a stigma associated if one did not complete his college course (Gonzalez, 1987, pp. 41-42). Indeed, "many students see access to credentials as providing social mobility to elite circles" (Swinerton, 1991, p. 31). Moreover, that most students of AAA High School were from relatively affluent, Chinese backgrounds may have rendered their perspective on college choice factors more homogeneous than otherwise.

Research Question 2.8

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students' mother's educational level?

A statistically significant difference was found for 1 out of the 13 college choice factors, when the survey population was disaggregated by students' mother's

educational level. Students with non-college-educated mothers rated the importance of the "social atmosphere" factor statistically significantly higher than students with college-educated mothers. The effect size is small-to-medium. Indeed, students with non-college-educated mothers rated all 13 college choice factors higher than did students with college-educated mothers.

These findings contradict U.S. research, both in the number of statistically significant differences, as well as the direction of these differences. (See above discussion relating to father's education level.) Perhaps this discrepancy between U.S. and Philippine findings may be partly explained by the milieu of the Philippines, and specifically that of AAA High School. (See above discussion relating to father's education level.)

Research Question 2.9

Is there a statistically significant difference in the relative importance ascribed to the college choice factor of religious emphasis, when the survey population was disaggregated by students' religion?

No statistically significant difference was found for the college choice factor of religious emphasis, when the survey population was disaggregated by students' religion, $n_{\text{Protestant Christian}} = 43$ and $n_{\text{Catholic Christian}} = 40$. (The information for Buddhist students and students of other religions was not used, due to low numbers.) There is not much in U.S. college choice literature which pertains to this subject.

Since the "religious emphasis" factor was operationalized in the survey as "Christian (Protestant) environment" (due to AAA High School's Protestant theology), the finding was somewhat surprising that Protestant and Catholic students did not differ

statistically in their responses. Perhaps future studies could distinguish between “Christian (Protestant) environment” and “Christian (Catholic) environment” to improve clarity of the questions.

Research Question 2.10

Is there a statistically significant difference in the relative importance ascribed to these major college choice factors, when the survey population was disaggregated by students’ friends/peer influence?

One-way ANOVAs could not be conducted, because the condition of balanced design was not met; over 95% of respondents answered that "all" of their close friends were planning to attend college. This finding, together with the demographic finding that 91.2% of survey respondents aspired to attend college, indicate that this is a select, elite student group. A counselor at AAA High School explained that, in general, parents of these students have middle-to-high-level income, have the mindset of making money in order to help in their children’s upbringing, and emphasize education. Moreover, AAA High School itself puts much emphasis for students to continue on into higher education. Similarly, McDonough (1997) found that U.S. “[s]eniors enrolled in private high schools are significantly more likely than public school seniors to enter college and enroll in four-year institutions, even when track, ability levels, aspirations, and SES are controlled” (p. 7).

Additional Finding

When asked "Where do you plan to live when attending college?" some 91% of respondents indicated that they planned to live at home. A guidance counselor at AAA

High School attributed this finding to Chinese parents' protectiveness of their children, as well as the conveniences of living at home.

Conclusions

Following are the conclusions of this study:

1. The major college choice factors in United States research appear to be important to private high school students in the Philippines.

2. Two demographic college choice attributes—academic ability and gender—appear to apply to private high school students in the Philippines, while the attributes of father's and mother's education levels do not appear to apply.

3. Assessing how two demographic college choice attributes—socioeconomic status and friends/peer influence—account for college choice is difficult in private high schools in the Philippines.

4. Among high school students in private high schools in the Philippines, academic ability may account for differences in assessment of the importance of college choice factors.

5. Using a survey method alone to study college choice in private high schools in the Philippines is limiting. Supplementing this with personal and group interviews—of parents as well as of students—may yield more insights in this area.

Implications

Implications from the data for the recruitment of students from private high schools in the Philippines by college administrators follow.

Although all of the major college choice factors surfaced in U.S. literature were important in the Philippine context, students rated some factors higher than others. The

factors with the highest ratings were future job opportunities, programs of study, academic quality, and religious emphasis. Thus, college administrators recruiting students from private high schools should develop recruiting strategies and procedures that would emphasize these factors. Possible actions include developing linkages with corporations to provide opportunities for students to have internships during their college years, starting a job placement office for alumni, hiring faculty with the highest academic credentials, having mandatory daily/weekly chapels, and requiring more religious courses. Also, regarding academic quality, it might be of value to publicize any external accreditation or academic ranking of the institution. Moreover, having an alumni office tracking the subsequent careers and/or educational attainments of alumni would provide valuable information, which could be used in public relations for the institution.

Other college choice factors were added based on pilot studies, and deemed important in this study. "Security" was the factor with the second highest importance rating. Thus, school administrators should maintain a high level of security at the institution.

The factor of "parents" was rated highest among the college choice factors linked to people. Thus, school administrators should also target parents in advertising endeavors. Possible actions include having focus groups to determine parents' college concerns and then addressing those concerns, giving parents literature related to the college, and providing family tours of the college campus.

Two U.S.-derived demographic college choice attributes—academic ability and gender—appear to apply to private high school students in the Philippines.

In order to attract high-ability students, school administrators should enhance the institution's academic quality and program offerings, and emphasize its academic quality and program offerings when marketing / advertising. Also, they should give targeted communication (e.g. email, mail, appointments) regarding the high quality of specific programs, if students' desired field of study is known. Moreover, they should understand that high-ability students probably submitted multiple college applications, and offer very competitive financial aid packages.

In order to attract male students, school administrators should provide information regarding tuition costs. To attract female students, school administrators should highlight its academic offerings, and emphasize campus security, its friendly student body, and available on- and off-campus religious organizations.

Recommendations

Following are several recommendations, based on the findings and conclusions of this study.

1. Future studies should utilize a variety of methods to collect data, including personal and group interviews, of parents as well as of students.

2. Future studies should also involve several schools (of various levels of selectivity and exclusiveness). Using multiple data-collection methods and data sources, then, would serve to check the validity of findings (i.e. data triangulation) (Gall, Gall, & Borg, 2003, p. 464).

3. Future studies should verify student's self-reported grade averages with their actual scores.

4. Future studies should avoid two weaknesses of this survey instrument, namely, weak race/ethnicity classification, and unclear religious emphasis question.

Personal Reflections on Conducting International Research

When conducting studies in another country, researchers should allow more time for various deadlines, and understand that existing research in the foreign country may be more difficult to access. Establishing contacts is key, and maintaining trust with the people is vital. Researchers should not be afraid to ask basic questions, and not assume that lifestyles are similar to one's home country. Researchers should exercise creativity in investigations, being willing to find alternative ways to answer the question at hand, in case the traditional method is not effective.

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

UNT
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OFFICE OF THE VICE PRESIDENT FOR RESEARCH AND ECONOMIC DEVELOPMENT
Office of Research Services

November 21, 2008

Christine Tan
Department of Counseling and Higher Education
University of North Texas

RE: Human Subjects Application No. 08393

Dear Ms. Tan:

In accordance with 45 CFR Part 46 Section 46.101, your study titled "College Choice in the Philippines: An Investigation of Factors Influencing the College Choice of High School Seniors at a Private School in Manila" has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed is the consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects.

No changes may be made to your study's procedures or forms without prior written approval from the UNT IRB. Please contact Shelia Bourns, Research Compliance Administrator, ext. 3940, if you wish to make any such changes.

Sincerely,

Patricia L. Kaminski, Ph.D.
Chair
Institutional Review Board

PK:sb

CC: Dr. Ron Newsom

1155 Union Circle #305250 | Denton, Texas 76203-5017 | TEL 940.565.3940 | FAX 940.565.4277
TTY 940.369.8652 | www.unt.edu

APPENDIX B

INFORMED CONSENT AND STUDENT ASSENT FORMS

November 2008

Dear Parent,

You are being asked to allow your child to participate in a research study (brief survey, completely anonymous) which involves studying the importance of college choice factors (as identified in United States research) to high school seniors in the Philippines. The participation of your child in this study is voluntary.

Because your child is under 18 years of age, your consent is required in order for him/her to participate in this study. This Informed Consent Form gives further details regarding the study.

Thank you very much for your gracious consideration.

Sincerely yours,
Christine J. Tan
Principal Investigator

UNT
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University of North Texas Institutional Review Board
Informed Consent Form

Before agreeing to your child's participation in this research study, it is important that you read and understand the following explanation of the purpose and benefits of the study and how it will be conducted.

Title of Study: COLLEGE CHOICE IN THE PHILIPPINES

Principal Investigator: Christine J. Tan, a graduate student in the University of North Texas (UNT) Department of Higher Education.

Purpose of the Study: You are being asked to allow your child to participate in a research study which involves studying the importance of college choice factors (as identified in United States research) to high school seniors in the Philippines. The participation of your child in this study is voluntary.

Study Procedures: Your child will be asked to fill out a brief survey that will take about 20 minutes of your child's time.

Foreseeable Risks: I do not foresee any risks to your child's involvement in this study.

Benefits to the Subjects or Others: This study is not expected to be of any direct benefit to your child. The study's results may provide more insights into the college selection process to students and parents. This study may also help colleges in the recruitment of students, as well as contribute to research on college choice in the Philippines.

Compensation for Participants: Your child will receive a mini-flashlight, after he/she has submitted the completed survey.

Procedures for Maintaining Confidentiality of Research Records: The survey is completely anonymous; your child will not be asked to write his/her name on the survey. The confidentiality of your child's individual information will be maintained in any publications or presentations regarding this study.

Questions about the Study: If you have any questions about the study, you may contact Christine J. Tan, or the faculty advisor, Dr. Ron Newsom (UNT Department of Counseling and Higher Education).

Review for the Protection of Participants: This research study has been reviewed and approved by the UNT Institutional Review Board (IRB). The UNT IRB can be contacted with any questions regarding the rights of research subjects.

Research Participants' Rights: Your signature below indicates that you have read or have had read to you all of the above and that you confirm all of the following:

- You understand the benefits and the potential risks and/or discomforts of the study.
- You understand that you do not have to allow your child to take part in this study, and your refusal to allow your child to participate or your decision to withdraw him/her from the study will involve no penalty or loss of rights or benefits. The study personnel may choose to stop your child's participation at any time.
- You understand why the study is being conducted and how it will be performed.
- You understand your rights as the parent/guardian of a research participant and you voluntarily consent to your child's participation in this study.
- You have been told you will receive a copy of this form.

_____
Printed Name of Parent or Guardian

_____ _____
Signature of Parent or Guardian Date

Please return this to your child's teacher within the next 3 days.

Student Assent Form

You are being asked to be part of a research project being done by the University of North Texas Department of Higher Education.

This study involves studying the importance of college choice factors (as identified in United States research) to high school seniors in the Philippines.

You will be asked to fill out a brief survey that will take about 20 minutes.

Participation in this study is voluntary. This will not affect your grades or your relationship with your teachers or school. If you decide to be part of this study, please remember you can stop participating any time you want to.

If you would like to be part of this study, please sign your name below.

_____
Printed Name of Child

_____ _____
Signature of Child Date

APPENDIX C

PILOT SURVEY EVALUATION FORM

Pilot Survey Evaluation Form

Please review the College Choice Survey for High School Seniors and answer the following questions:

(1) Were the instructions *clear* ?

(2) Were any of the questions unclear or ambiguous ? If so, please specify which question(s) and why.

(3) Are there any questions that you think students would object to answering ?

(4) In your opinion, has any major topic been omitted ?

(5) Was the layout of the survey clear/attractive ?

(6) Any other comments ?

APPENDIX D

SURVEY INSTRUMENT

COLLEGE CHOICE SURVEY
for High School Seniors

A

This survey examines the relative importance of major college choice factors to high school seniors in the Philippines. Your honest and thoughtful answers are very important.

YOUR RESPONSES WILL REMAIN CONFIDENTIAL AND ANONYMOUS.

It takes around 20 minutes to complete this survey. Thank you for your participation.

GENERAL INSTRUCTIONS:
Read each item carefully and darken the appropriate circle using the scale provided below. Please make no other marks.

Shade Circles Like This--> ●
Not Like This--> ⊗ ✓

COLLEGE TRAITS IMPORTANT TO ME

ACADEMICS

Please rate the importance of the following academic factors in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
1. Quality of professors	⑤	④	③	②	①
2. Good academic reputation	⑤	④	③	②	①
3. Variety of majors and courses	⑤	④	③	②	①
4. Offers the major/s and courses I want	⑤	④	③	②	①
5. Quality of major/s and courses I am interested in	⑤	④	③	②	①
6. Quality of learning resources and facilities (library, computers, laboratories, etc.)	⑤	④	③	②	①
7. Interaction between students and professors	⑤	④	③	②	①
8. Focus on undergraduate education	⑤	④	③	②	①

FINANCIAL CONSIDERATIONS

Please rate the importance of the following financial factors in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
9. Cost of attending college	⑤	④	③	②	①
10. Room and Board expenses	⑤	④	③	②	①
11. Availability of scholarships / financial aid	⑤	④	③	②	①
12. Availability of Internship / co-op opportunities	⑤	④	③	②	①
13. Availability of loans	⑤	④	③	②	①

EXTRACURRICULAR / SOCIAL ASPECTS

Please rate the importance of the following extracurricular / social factors in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
14. Variety of extracurricular activities (clubs, music, theater, etc.)	⑤	④	③	②	①
15. Quality of social life / activities	⑤	④	③	②	①
16. Being with my friends	⑤	④	③	②	①
17. Opportunity to interact with students from different backgrounds	⑤	④	③	②	①

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MISCELLAENOUS

A

Please rate the importance of the following factors in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
18. Christian (Protestant) environment	5	4	3	2	1
19. Future job opportunities	5	4	3	2	1
20. Convenient driving distance from home	5	4	3	2	1
21. Quality of campus residence halls	5	4	3	2	1
22. Secure/Safe campus and environment	5	4	3	2	1

OPINIONS IMPORTANT TO ME

Please rate the importance of the opinions of the following persons in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
23. Advice of parents / guardians	5	4	3	2	1
24. Advice of father / male guardian	5	4	3	2	1
25. Advice of mother / female guardian	5	4	3	2	1
26. Advice of guidance counselor/s	5	4	3	2	1
27. Advice of friends	5	4	3	2	1
28. Advice of pastor and/or religious adviser	5	4	3	2	1

INFORMATION SOURCES IMPORTANT TO ME

Please rate the importance of the following information sources in *your* selection of a college.

	Most Important	Very Important	Somewhat Important	Little Importance	Not Important
29. Visits by college admissions officers	5	4	3	2	1
30. College literature (catalogs, flyers, brochures, etc.)	5	4	3	2	1
31. College website	5	4	3	2	1
32. College DVDs / CD-ROMs / videos	5	4	3	2	1
33. Campus visit	5	4	3	2	1
34. Contact with college professors	5	4	3	2	1
35. Contact with college alumni	5	4	3	2	1
36. Contact with college students	5	4	3	2	1

37. What is the highest academic degree you plan to attain in your lifetime?

- O High School diploma
- O Associate's degree / Some college
- O Bachelor's degree (e.g., B.A., B.S., B.B.A., etc.)
- O Master's degree (e.g., M.A., M.S., M.B.A., etc.)
- O Doctoral degree (e.g., Ph.D., M.D., Ed.D., D.D.S., J.D., etc.)

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DEMOGRAPHICS

A

Please answer the following questions about yourself.

38. Gender: ○ Male ○ Female

39. What is your class section?
○ IV-1 ○ IV-2 ○ IV-3
○ IV-4 ○ IV-5 ○ IV-6 ○ IV-7

40. What is your race / ethnicity?
○ Chinese ○ Filipino
○ Chinese & Filipino ○ Other _____

41. Religion:
○ Protestant Christian
○ Catholic Christian
○ Islam
○ Buddhism
○ Iglesia ni Cristo
○ Philippine Independent Church
○ Other: _____

42. Among your close friends, how many plan to attend college?
○ All
○ Most
○ Some
○ Very Few
○ None
○ I don't know / Not applicable

43. What is your overall high school average?
○ A (92 - 100)
○ B (83 - 91)
○ C (70 - 82)
○ D or below (0 - 69)

44. What is the highest level of education achieved by your parent/s / guardian/s?

	Father / Male Guardian	Mother / Female Guardian
Elementary studies	①	①
Some High School	②	②
High School Diploma	③	③
High School & Some College	④	④
Associate's Degree	⑤	⑤
Bachelor's Degree	⑥	⑥
Master's Degree	⑦	⑦
Doctoral Degree	⑧	⑧
I don't know / Not applicable	⑨	⑨

45. Where do you plan to live when attending college?
○ Home
○ Campus Residence Hall
○ Apartment
○ Other (specify): _____

46. What was the approximate income (in pesos) of your parents/guardians last year?
○ Under 40,000
○ 40,000 - 59,999
○ 60,000 - 99,999
○ 100,000 - 249,999
○ 250,000 and over
○ I prefer not to answer this question / I don't know.

47. Are there any other factors or people that you consider important in your selection of a college to attend? If so, please describe below.

Thank you for your participation in our survey!

APPENDIX E

INFORMATION TABLES

Table E.1 *Demographic Characteristics of Student Respondents*

Student characteristics		*N = 226*	%
Gender	Male	100	44.2
	Female	126	55.7
Race/ethnicity	Chinese	90	39.8
	Filipino	18	8.0
	Chinese & Filipino	108	47.8
	Other	5	2.2
	Missing	5	2.2
Socioeconomic status (in pesos)	Under 40,000	9	4.0
	40,000 – 59,999	15	6.6
	60,000 – 99,999	39	17.3
	100,000 – 249,999	38	16.8
	250,000 and over	46	20.4
	Missing	79	35.0
Academic ability (honors vs. non-honors)	Non-Honors	196	86.7
	Honors	29	12.8
	Missing	1	0.4
Academic ability (overall high school average)	A (92-100)	58	25.7
	B (83-91)	146	64.6
	C (70-82)	22	9.7
Educational aspirations/ expectations	Non-college-bound	20	8.8
	College-bound	206	91.2

(*table continues*)

Table E.1 (*continued*).

Student characteristics		*N = 226*	%
Father's educational level	Non-college-educated father	93	41.2
	College-educated father	121	53.5
	Missing	12	5.3
Mother's educational level	Non-college-educated mother	73	32.3
	College-educated mother	136	60.2
	Missing	17	7.5
Religion	Protestant Christian	169	74.8
	Catholic Christian	40	17.7
	Buddhism	8	3.5
	Other	7	3.1
	Missing	2	0.9
Friends/peer influence (number of friends planning to attend college)	None	1	0.4
	Very Few	2	0.9
	Some	3	1.3
	Most	4	1.8
	All	214	94.7
	Missing	2	0.9

Table E.2

College Choice Factors (Dependent Variables) and Survey Questions

College Choice Factors	Survey Questions
Academic quality	1. Quality of professors
	2. Good academic reputation
	5. Quality of major/s and courses I am interested in
	6. Quality of learning resources and facilities (library, computers, laboratories, etc.)
	7. Interaction between students and professors
	8. Focus on undergraduate education
College marketing	29. Visits by college admissions officers to GCHS
	30. College literature (catalogs, flyers, brochures, etc.)
	31. College website
	32. College DVDs/CD-ROMs/videos
	33. Campus visit
	34. Contact with college professors
	35. Contact with college alumni
	36. Contact with college students

(*table continues*)

Table E.2 (*continued*).

College Choice Factors	Survey Questions
Cost and financial aid	9. Cost of attending college
	10. Room and board expenses
	11. Availability of scholarships/financial aid
	12. Availability of internship/co-op opportunities
	13. Availability of loans
Friends	27. Advice of friends
Guidance counselors	26. Advice of guidance counselor/s
Job placement	19. Future job opportunities
Location	20. Convenient driving distance from home
	21. Quality of campus residence halls
Parents	23. Advice of parents/guardians
	24. Advice of father/male guardian
	25. Advice of mother/female guardian
Pastor/religious adviser	28. Advice of pastor and/or religious adviser
Programs of study	3. Variety of majors and courses
	4. Offers the major(s) and courses I want
Religious emphasis	18. Christian (Protestant) environment
Security	22. Secure/safe campus and environment

(*table continues*)

Table E.2 (*continued*).

College Choice Factors	Survey Questions
Social atmosphere	14. Variety of extracurricular activities (clubs, music, theater, etc.)
	15. Quality of social life/activities
	16. Being with my friends
	17. Opportunity to interact with students from different backgrounds

Table E.3

Demographic Factors (Independent Variables) and Survey Questions

College Choice Factors	Survey Questions
Academic ability	43. What is your overall high school grade average?
	39. What is your class section?
Socioeconomic status	46. What was the approximate income (*in pesos*) of your parents/guardians last year?
Gender	38. Gender
Educational aspirations/ expectations	37. What is the highest academic degree you plan to attain in your lifetime?
Race/ethnicity	40. What is your race/ethnicity?
Father's educational level/ Mother's educational level	44. What is the highest level of education achieved by your parent/s/guardian/s?
Religion	41. Religion
Friends/peer influence	42. Among your close friends, how many plan to attend college?

APPENDIX F

STUDENT CHARACTERISTICS AND INSTITUTIONAL PRACTICE

Student College Choice Characteristics and Implications for Institutional Practice

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
ACADEMIC ABILITY	
● When a student's academic ability is greater, he/she: —is more likely to aspire to attend college. —is likely to submit more college applications. —is more likely to apply to/attend (a) a more selective institution, (b) a high-cost institution, (c) an institution located further from home, (d) a private institution, and (e) a four-year institution. —is more concerned about academic quality and programs of study, and less about job opportunities, campus location and appearance, and financial matters.	● Higher education institutions desiring to attract high-ability students should: —enhance the institution's academic quality and program offerings. —emphasize its academic quality and program offerings when marketing/advertising. —give targeted communication (e.g. email, mail, appointments) regarding the high quality of specific programs, if students' desired field of study is known. —understand that high-ability students probably submitted multiple college applications.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
—attaches the most importance to an institution's perceived quality. —is less sensitive to increases in tuition costs. —takes financial aid into more consideration, when his/her 2nd or 3rd-choice institution offers more financial aid than his/her 1st choice.	—offer very competitive financial aid packages.
SOCIOECONOMIC STATUS	
● When a student's family income is higher, he/she: —is more likely to aspire to attend college. —is more likely to apply to/attend (a) a more selective institution, (b) a high-cost institution, (c) an institution located further from home, (d) a private institution, and (e) a four-year institution.	● Higher education institutions desiring to attract high-socioeconomic status students should: —market/advertise the exclusiveness of the school. —market/advertise the campus and available social activities.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
—is less sensitive to increases in tuition costs. —is less attracted by financial aid. —has several sources of information (including parents, private counselors, etc.). ● When a student's family income is lower, he/she: —is likely *not* to apply to college in the senior year. —is likely to submit less college applications. —is more sensitive to increases in tuition costs.	—use popular public figures to promote the school. ● Higher education institutions desiring to attract low-socioeconomic status students should: —keep its tuition costs low. —offer generous financial aid packages. —target high school students who already live near the campus. —emphasize the location of the school (i.e. near home). —partner-up with counselors at local high schools to give college information to students.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
—is more attracted to a college, as its financial aid offer increases. —is more likely to have a narrow geographical search range for college. —depends more on high school counselors for information.	
RACE/ETHNICITY	
● *Note:* Educational research on Asian Pacific Americans in general is limited, and research on ethnic subgroups' educational experiences is even less. ● Chinese- and Korean-Americans had greater representation in selective, private, and four-year universities. ● Filipino-, Japanese-, and Southeast Asian-Americans at greater representation at less-selective, public institutions.	

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
HIGH SCHOOL ENVIRONMENT	
● *Note:* High school traits do not have as strong predictive strength as students' socioeconomic status, academic ability, and parental influence. ● When a student takes up a college preparatory curriculum in high school, he/she —is more likely to aspire to attend college. —is more likely to apply to/attend (a) a more selective institution, (b) a high-cost institution.	● Higher education institutions desiring to attract students should: —target students taking college preparatory curriculum in high school. —target students taking a rigorous math curriculum in high school. ● High schools desiring to encourage students to attend college should: —encourage students to take up college preparatory courses, if possible. —encourage students to take up rigorous math courses, if they are able.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
● When a student participated in a rigorous math curriculum, he/she is more likely to attend college. ● Students in private high schools are more likely than public high school students to enter four-year higher education institutions.	—Public high schools should imitate private schools in having smaller classes, conveying rules and expectations to students, and providing enough counselors.
EDUCATIONAL ASPIRATIONS/EXPECTATIONS	
● Students who aspire to attend college by 10th grade, have an increased likelihood of attending college compared to students who develop educational intentions in their senior year. ● Students' postsecondary educational aspirations are directly related to parental encouragements.	● High schools desiring to encourage students to attend college should: —start *early* (even in the 9th grade) to give students information about colleges. —give parents information about college options, and addresses parental concerns (e.g. finances).

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
● When a student's educational aspirations are higher, he/she: —is more likely to apply to/attend (a) a more selective institution, (b) a high-cost institution, (c) an institution located further from home, (d) a private institution, and (e) a four-year institution.	—use various, creative means of giving students and parents college information (e.g. college fairs, speakers, etc.).
GENDER	
Note: Several studies failed to find statistically significant differences in choice behavior along gender lines. ● Male students: —tend to consider tuition the most important criterion. —rely more on high school counselors than women do.	● Higher education institutions desiring to attract male students should: —provide information regarding tuition costs.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
● Female students: —tend to consider academics the most important criterion. —place a higher level of importance on safety-security, friendly atmosphere, and religious atmosphere than do male students. —seek the advice of college students more so than men.	● Higher education institutions desiring to attract female students should: —highlight its academic offerings. —emphasize campus security, its friendly student body, and available on- and off-campus religious organizations.
PARENTS' EDUCATIONAL LEVEL	
● When a student is first-generation college-bound (i.e. parents did not attend college), he/she: —starts to consider college later than students whose parents did attend college.	● High schools desiring to encourage first-generation students to attend college should: —promote the idea of college attendance *early* and by various means, including giving information to parents, etc.

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
—his/her thoughts about college are triggered by school teachers and counselors. —lacks direction regarding the right courses to take in preparation for college. —experiences cultural struggles between the college-oriented world and his/her own family milieu.	—have enough trained counselors advising students on college options and course preparations. ● Higher education institutions desiring to attract (and keep) first-generation college-bound students should: —provide counselors to advise beginning students on what make-up courses to take (if needed). —structure a support system (counselors, peer groups, etc.) to help students deal with their cultural conflicts. —provide college-related information to students' families (e.g. college-orientation day for families, etc.).

(*table continues*)

Appendix F (*continued*).

Student Characteristics which Increase the Probability of College Choice [Derived from Current Research]	The Implications of these Characteristics for Institutional Practice
FRIENDS/PEER INFLUENCE	
● When a student's peers plan to attend college, he/she is more likely to aspire to go to college.	● Higher education institutions desiring to attract students should: —hold college-information gatherings for high schoolers which involve the class/grade as a whole.
RELIGION	
● Preferences concerning the religious orientation of colleges/universities may be more relevant to students from families with strong religious beliefs.	● Religious colleges/universities desiring to attract students should: —market/advertise to churches/organizations which hold similar religious beliefs. —emphasize aspects of its college experience which are religious (e.g. chapels, Bible classes, Christian professors, etc.).

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