College Bound/Images: how students perceive a precollege program to increase the pool of ethnic minorities seeking college admission at Iowa's Regents institutions

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College Bound/Images: How students perceive a precollege program to increase the pool of ethnic minorities seeking college admission at Iowa's Regents institutions

Hoagland, Sandy, Jr., Ph.D.

Iowa State University, 1993

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College Bound/Images:  How students perceive a precollege program to increase the pool of ethnic minorities seeking college admission at Iowa's Regents institutions

by

Sandy Hoagland, Jr.

A Dissertation Submitted to the Graduate Faculty in Partial Fulfillment of the Requirements of the Degree of DOCTOR OF PHILOSOPHY

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For the Graduate College

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Ames, Iowa

1993

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A dilemma faced by both college and university administrators during recent years has been that of promoting high-quality education while acknowledging factors such as dwindling fiscal resources, declining enrollment, and increasing public demand for accountability (United States Census Bureau 1992). Hoping to maintain high academic standards and institutional quality while increasing diversity among the student population, university and college administrators are attempting to attract ethnic minority high school graduates. Because only a small percentage of ethnic minority high school students complete high school, the demand for these few students is intense. At present, little empirical evidence exists regarding the factors influencing ethnic minority student perceptions of education beyond high school.

The American Council on Education (1985) attributed low college enrollment rates among ethnic minority students to the group's low high school graduation rates. The Council also stated that the trend among postsecondary institutions to increase admissions requirements while cutting developmental and remedial programs has reduced the number of ethnic minority students seeking higher education. Finally, the Council cited dwindling state and federal grants and loans.
Wilson (1989) reported in the eighth annual status report "Minorities in Higher Education" that from 1976 to 1988 the limited participation of African-American, Hispanic, and American Indian students enrolled in institutions of higher learning was due to low high school graduation rates among these same groups. During the same period, the graduation rates of these groups had dropped from 40 to 30 percent. The researcher assumed that ethnic minority students of low to moderately low socioeconomic statuses were hard hit in terms of decreasing rates of participation in higher education.

Mingle (1987) reported that the decrease in ethnic minority students seeking college admission did not begin in earnest until the 1981 academic year. Ethnic minority student enrollment in higher education peaked in the mid-1970s and has declined since then. Mingle attributed this reduction to decreased funding for counseling and retention programs. He also cited limited minority faculty and staff representation. In conclusion, he encouraged colleges and universities to hire additional minority faculty and staff members to serve as mentors who would likely be more sensitive to the personal problems hindering intellectual development among minority student than would nonminority faculty and staff members.

In view of the growing demand for minority faculty and staff members in higher education, Richardson (1987) suggested that colleges and universities continue offering remedial programs for ethnic minority students. He pointed out that
such remedial programs help students acquire basic skills in math, science, and English. Such programs can be vehicles fostering successful learning in ethnic minority students with learning disabilities. Richardson maintained that four-year institutions should adapt certain methods used by two-year institutions inasmuch as the latter have had relatively high graduation rates among ethnic minority students during the past two decades. In that researcher's opinion, the success of two-year institutions has been due to aggressive remediation for students demonstrating learning difficulties in math, science, and/or English. When remedial programs were not available, students viewed their chances of succeeding in college as slim. Richardson concluded by encouraging four-year institutions to invest available resources heavily in remedial programs, which have the potential to alleviate problems related to declining enrollment among ethnic minorities.

Nora's (1987) study indicated that lack of institutional commitment to the academic achievement of ethnic minority students limits the likelihood of their enrolling. Most college and university administrators fail to recognize that many ethnic minority students enter higher education with inadequate academic preparation. But institutional commitment is requisite if ethnic minority student enrollment in higher education is to increase meaningfully. Additionally, Nora felt that colleges and universities should implement programs
emphasizing institutional commitment as a means of promoting academic achievement among ethnic minority students in higher education. He encouraged the founding of precollege programs between high schools and postsecondary institutions. By having the opportunity to become involved with higher education curricula before graduating from high school, minority students would be encouraged to seek college admission. Taking college credit courses before completing high school should allow ethnic minority students to experience the academic challenges awaiting them in higher education.

Purpose of the Study

The purpose of this study is to examine how students perceive College Bound/Images as a precollege program to increase the pool of ethnic minorities seeking college admission at Iowa’s Regents institutions. It is assumed that students’ perceptions about College Bound/Images are important indicators to describe how effectively the precollege program inspires ethnic minorities to seek college admission upon high school graduation. It is assumed that if students perceive the College Bound/Images Program to be motivational, the methods, activities, and programs implemented by Iowa’s Regents institutions will continue to inspire ethnic minorities to seek college admission in the future.
In view of the history of intervention programs over the last 25-30 years, Havighurst (1979) reported that not only does the social competence of minority students from low socioeconomic families improve as a result of such programs, but their cognitive competence increases. But for social and/or cognitive competence to improve, year long programs must be implemented as opposed to summer programs. Intervention programs, e.g., precollege programs, across the nation were, in that researcher's estimation, excellence motivational tools promoting compensatory education.

An Overview of the College Bound/Images Program

One precollege program designed to increase the pool of ethnic minority students eligible for college admission in the State of Iowa is called College Bound/Images. The program began on the campuses of Iowa State University, the University of Iowa, and the University of Northern Iowa during the 1989 fall semester. College Bound/Images Programs have been implemented at the three Iowa Regents institutions in order to enhance educational opportunities for Iowa's K-12 ethnic minority students.

The program focuses on attracting academically marginal or academically at-risk ethnic minority students to postsecondary education in Iowa. Funding is allocated to target ethnic minorities in elementary, middle, and secondary schools. Goals and objectives for the College Bound/Images
Program, as implemented by the Board of Regents, are equally encouraged by each institution and are as follows:

1. to encourage ethnic minority students to complete high school and to consider attending a postsecondary institutions in Iowa;
2. to provide programs for enrichment and academic preparation; and
3. to provide information about how to apply for both admission to and financial aid from Iowa colleges and universities.

The goals and the objectives administered by each Regents institution are distinct in terms of methods used to attract ethnic minority students.

The Goals and Objectives of Iowa State University's College Bound/Images Program

The College Bound/Images Program at Iowa State University cites nine objectives:

1. To conduct parent and guardian intervention involvement strategy sessions through churches and other religious organization, community and school organizations, and local media;
2. To conduct and to develop readily available and easily accessible support sessions affording students and families opportunities for service,
orientation to a broader world beyond school, and motivation to continue in education;

3. To involve faculty in planning, developing, and implementing College Bound/Images Programs;

4. To involve offices of Admissions, Student Financial Aid, Minority Student Affairs, Dean of Students and other student services, at Iowa State University;

5. To conduct informational sessions guiding students to long-term career, economic, and social goals;

6. To conduct sessions building self-esteem and instilling positive attitudes towards success;

7. To develop community and teacher advocacy initiatives encouraging personal contact with students and families;

8. To develop a counselor-adjunct program focusing on easing the transition to college; and

9. To evaluate the outcomes of early awareness programs.

Thirteen projects and activities are articulated by Iowa State University’s College Bound/Images Program in conjunction with several public school districts throughout the state. These projects and activities focus on enhancing ethnic minority student perceptions of the value of seeking college admission.

Projects and activities selected by Iowa State University’s College Bound/Images Program are as follows:
1. A cooperative proposal with the Des Moines school district to enhance the possibilities of middle-school-age children's attending universities;  
2. Iowa State University and Des Moines public schools' Science Mentor for Ethnic Minority Students Program;  
3. Native American Middle School Art Program;  
4. Minority Engineering Program Quiz Bowl;  
5. Cooperative proposal to inform elementary and middle school students and their families about benefits and means of financing education;  
6. School-to-college Transition Program;  
7. Black youth Science Expo Program;  
8. Parent-student Visitation Weekend Program;  
9. Visiting Scholars Programs;  
10. Summer Experiences for Prospective High School Seminar Program;  
11. Special lecture programs;  
12. Scholarship Recognition Opportunities Program; and  
13. Cooperative Venture Program.

The Goals and Objectives of the University of Iowa's College Bound/Images Program

The College Bound/Images Program at the University of Iowa identifies three primary objectives:
1. To work with elementary and secondary schools in Iowa by identifying students of color who will benefit from one of several summer youth programs;
2. To develop special learning opportunities for students of color in Iowa School districts designated "desegregation" districts by the United States Department of Education; and
3. To develop in cooperation with school districts and community agencies, campus- and community-based programs focusing on higher education and hands-on educational programs for high school students of color.

Projects and activities selected by the University of Iowa College Bound/Images Program in order to enhance ethnic minority perceptions of the value of seeking college admission are as follows:

1. The American Indian Science and Engineering Society Program;
2. Teaching Native American Students; Attention to Action Program;
3. The Science and Math Connection Program;
4. The Secondary Student Training Program;
5. Project Blast Program;
6. The University of Iowa Council on the Status of Latinos;
7. The League of United Latin American Citizens;
8. The Powwow Program;
9. The Youth in Action Shadowing Experience;
10. Art Education/Outreach Program;
11. Bridging the Gap Program;
12. Student Pre-orientation Program; and

The Goals and Objectives of the University of Northern Iowa’s College Bound/Images Program

The College Bound/Images Program at the University of Northern Iowa cites three main objectives:

1. To encourage enrollment in postsecondary institutions;
2. To provide information regarding admissions requirements, the universities, and the admission process; and
3. To provide both enrichment and academic preparatory programs.

The 22 projects and activities implemented by the University of Northern Iowa College Bound/Images Program to encourage ethnic minority interest in college admission are as follows:

1. Young Scholars Seminar;
2. United Sisters Conference;
3. South Tama Campus Visit;
4. MIT Summer Enrich. Program;
5. Campus Visit Burlington-Keokuk;
6. High School Visit--Waterloo;
7. New Generations--ETS;
8. Sioux City Community Meeting;
9. Boys-Girls Club Campus Visit;
11. Black History Video Conference;
12. Minority Student Video Conference;
13. UNI Talent Search;
14. ETS--Career Workshop;
15. Ft. Dodge Campus Visit Program;
16. Keokuk High School Visit;
17. Play--Joe Turner;
18. Burlington High School Visit;
19. Davenport MIT Program;
20. Dual Enrollment--913;
21. MIT--Waterloo Campus Visit; and
22. CR Washington Campus Visit 913

Statement of the Problem

Extensive discussions about how to increase the pool of ethnic minority students applying for college admission have taken place among community leaders, politicians, college administrators, and faculty members during recent years. Motivation for these discussions is the conclusion that the number of ethnic minority high school graduates seeking
college admission is disproportionately small compared with that of nonminority students.

The U.S. Department of Education (1992) reported that although there has been an increase among ethnic minority students seeking college admission, the increase from 1980 through 1990 has been small compared with the increase in nonminority students seeking admission. The total number of ethnic minority students (native-American Indian, Asian, American, African-American, and Hispanic) enrolled in higher education by 1991 was 2,639,000 compared with 10,675,000 nonminority students (see Appendix A). These figures are the outcome, as mentioned by the U.S. Department of Education (1992), of both declining high school graduation rates among ethnic minority students and lack of financial resources. For example, regarding Hispanic students, the Chronicle of Higher Education (1992) reported a decrease in high school graduation rates from 29.8% in 1980 to 29.0% in 1990 (see Appendix A).

The Chronicle of Higher Education (1992) also noted that the proportion of African-American students 18 to 24 years of age who had completed high school had increased slightly from 27.6% in 1980 to 33.0% by 1990 (see Appendix A). But the increase for nonminority students graduating from high school was much greater. This rate increased from 31.8% in 1980 to 39.4% in 1990.

Moreover, according to the Chronicle of Higher Education (1992), 28 of the 50 states had midyear budget cuts during
their academic fiscal year (see Appendix A). Such cuts often make it difficult for ethnic minority students to find monies available not only to finance their educational aspiration beyond high school, but also to fund precollege programs encouraging such aspirations.

This study will make a contribution to the body of research regarding how precollege programs can help inspire ethnic minority students to seek college admission. It is hoped that as a result of this study, enrollment among ethnic minority students in institutions of higher learning in the State of Iowa will continue to increase.

Research Questions

1. How do students differ, by grade level, in terms of their perceptions about what type of college community to attend upon graduating from high school (see Appendix B)?

2. How do students differ, by grade level, in terms of their perceptions of enrichment/academic programs and activities offered by College Bound/Images to inspire ethnic minorities to attend college (see Appendix B)?

3. How do students differ, by ethnic background, in terms of their perceptions of enrichment/academic programs and activities offered by College Bound/Images to encourage ethnic minorities to attend college (see Appendix B)?

4. How do students differ by ethnic background, in terms of their perceptions of College Bound/Images’ ability to
encourage ethnic minorities to attend college (see Appendix B)?

5. To what extent do students, by gender, differ in their perceptions of enrichment/academic programs and activities offered by College Bound/Images to inspire ethnic minorities to attend college (see Appendix B)?

6. How do students differ, by grade level, in terms of their perceptions about the importance of educational aspirations in the seeking of college admission (see Appendix B)?

7. To what extent do students differ, by gender, in terms of their perceptions of the importance of educational aspirations in the seeking of college admission (see Appendix B)?

8. How do students differ, by ethnic background, in terms of their perceptions about the importance of educational aspirations in the seeking of college admission (see Appendix B)?

9. How do students differ, by grade level, in terms of the effect that their parents' educational backgrounds have on their own college aspirations (see Appendix B)?

10. How do students differ, by ethnic background, in terms of the effect that their parents' educational backgrounds have on their own aspirations (see Appendix B)?
11. How do students differ, by gender, in terms of the effect that parents' educational backgrounds have on their own college aspirations (see Appendix B)?

12. To what extent do students differ, by gender, in terms of their perceptions regarding college financing (see Appendix B)?

13. To what extent do students differ, by grade level, in terms of their perceptions about college financing (see Appendix B)?

14. To what extent do students differ, by grade level, in terms of their perceptions about college financing (see Appendix B)?

15. How does length of time in College Bound/Images affect, by grade level, students' perceptions regarding the program's ability to increase the number of ethnic minority students eligible for college admission (see Appendix B)?

16. How does length of time in College Bound/Images affect, by ethnic background, students' perceptions regarding the program's ability to increase the number of ethnic minority students eligible for college admission (see Appendix B)?

17. How does length of time in College Bound/Images affect, by gender, student's perceptions regarding the program's ability to increase the number of ethnic minority students eligible for college admission (see Appendix B)?
Significance of the Study

Kohlberg (1971) stated that major life decisions are often made under the influence of several factors. He emphasized that the sorting process for humans is quite complex and that decision making can be affected in most situations by other persons, past experiences, and innate abilities. Research providing empirical evidence of the factors strongly influencing minority students' decisions to seek college admission should benefit college and university administrators trying to recruit and retain such students.

In view of Kohlberg's (1971) findings, the significance of the current study is that it attempts to provide information regarding factors influencing ethnic minority students' desire to seek college admission. It also suggests to college and minority administrators that new programs and recruitment strategies can somewhat help with increasing ethnic minority students' enrollment in higher education. The study will use recent data and thereby provide a contemporary examination of ethnic minority student perceptions of college admission.

Operational Definitions

Board of Regents is a group composed of nine members nominated by the governor of Iowa and confirmed by the Senate of Iowa. This group governs the state's institutions of higher learning.
College Bound is an intervention program designed to heighten educational aspirations beyond secondary school among minority students not well prepared for college studies.

College Bound/Images Participants are students enrolled in elementary, middle, or senior high schools and actively involved in the College Bound/Images Program.

Ethnic Minority Students "are actual or potential College Bound/Images participants sharing distinct cultural characteristics originating from a common national, linguistic, or racial heritage" (Gollnick, 1990).

Iowa State University's College Bound/Images Program is a precollege program designed to attract academically marginal or at-risk ethnic minority students to postsecondary education in Iowa.

University of Iowa's College Bound/Images Program is a precollege program designed to attract academically marginal or at-risk ethnic minority students to postsecondary education in Iowa.

University of Northern Iowa's College Bound/Images Program is a precollege program designed to attract academically marginal or at-risk ethnic minority students to postsecondary education in Iowa.

Academically Marginal "are students lacking certain basic skills and thus failing certain statewide examinations appropriate for their age groups. Academic performance is average to slightly above average" (Tillman, 1991).
Academically At-risk "are students lacking certain basic skills and thus failing certain statewide examinations appropriate for their age groups. Academic performance is slightly below average to average" (Tillman, 1991).

Perception "is a process that has to do with the reception or taking in of the various sensory systems (touch, taste, sight, smell, and hearing) of an individual" (Schiamberg, 1985).

Images is a program designed to finance academically marginal or at-risk ethnic minority students during their postsecondary education training.

Basic Assumptions

Five conditions will be assumed:

1. Responses to the questionnaire will represent the opinions of College Bound/Images students during the 1992-1993 school term.

2. The survey of College Bound/Images students will elicit responses reflecting individual respondents.

3. Items on the instrument will reflect factors influencing ethnic minority student perceptions of college admission.

4. College Bound/Images students are a representative sample of ethnic minority students.

5. The transition from high school to college can be a frightening experience for many students.
Limitations of the Study

The study will be limited in these terms:

1. It will include data only from students enrolled in the College Bound/Images Program during the 1992-1993 school term.

2. There will be a percentage of responses left incomplete on the questionnaire, and thus results may be biased.

3. The study will be limited by the variables chosen.

4. The study will be limited by the questions asked.

5. Because of the Regents institutions' policies and procedures regarding student confidentiality, questionnaires were mailed to students by each Regents institution instead of by the chief investigator.

6. Because of the Regents institutions' policies and procedures regarding student confidentiality, students selected to participate in the study were randomly selected by each Regents institution instead of by the chief investigator.

7. Because of the Regents institutions' policies and procedures regarding student confidentiality, student home phone numbers were not provided by each Regents institution; therefore, no numbers were provided for follow-up telephone calls to nonrespondents by the chief investigator.
Organization of Chapters

This dissertation consists of five chapters, a bibliography, and appendices. Chapter One includes an introduction to the study, the study purpose, and an overview of the College Bound/Images Program, the goals and objectives of Iowa State University’s College Bound/Images Program, projects and activities associated with that program, the goals and objectives of the University of Iowa’s College Bound/Images Program, projects and activities associated with that program, the goals and objectives of the University of Northern Iowa’s College Bound/Images Program, projects and activities associated with that program, problem statement, research questions, study significance, operational definitions, basic assumptions, study limitations, and chapter organization.

Chapter Two discusses current studies related to how students perceive precollege programs’ abilities to increase the pool of ethnic minorities seeking college admission after high school graduation. The review of literature was divided into five sections: introduction; potential factors influencing student decisions regarding college admission (see Appendix C); potential factors influencing ethnic minority students’ decisions (see Appendix C); precollege programs designed to encourage ethnic minority student decisions to seek higher education and articulated by both comprehensive community colleges and public school districts (see Appendix
C); precollege programs designed to encourage ethnic minority students to seek higher education and articulated by both four-year institutions and public school districts (see Appendix D); and summary.

Chapter Three examines the study's methodology. This chapter discusses study design, sample population, study subjects, instrument development (see Appendix E), survey procedures, data coding, and data analyses with statistical procedures (see Appendix F).

Chapter Four includes an introduction, analysis and interpretations of the data.

Chapter Five summarizes findings, conclusions, and recommendations for the College Bound/Images Program.
CHAPTER TWO: LITERATURE REVIEW

Introduction

In general, much information exists regarding student educational aspirations beyond high school (Mingle, 1987) although information regarding ethnic minority students' educational aspirations beyond high school is limited. The first section of this chapter will discuss factors influencing student decisions regarding college admission. The second section will discuss factors influencing ethnic minority student decisions. The third section will discuss precollege programs designed to encourage ethnic minority students to seek higher education and articulated by both comprehensive community colleges and public school districts. The fourth and final section will concentrate on precollege programs designed to encourage ethnic minority students to seek higher education and articulated by both four-year institutions and public school districts.

The breadth of literature concerning the academic and the social needs of students seeking postsecondary education has expanded tremendously since the early 1960s (Mingle 1987). The next section first will examine factors influencing student decisions regarding college admission during the past two decades.
Perception: Some Potential Factors Perceived by Students to Influence Their College Admission

Hearn (1985) singled out parental savings and tuition as major factors influencing not only student decisions regarding college admission, but also the type of college to attend. He stated that these two issues would significantly influence student decisions for decades to come. In most instances parental savings were the only source of income available to pay tuition.

Olson (1984) likewise discussed parental savings, based upon occupational status, and financial assistance from colleges and universities as major factors influencing student decisions regarding postsecondary education. He stressed that college and university administrations would do well to increase financial assistance to students when parental savings declined.

In contrast, Astin (1978) posited that the amount awarded by financial assistance programs was the major factor influencing student decisions. Once financial aid is awarded, students often have sufficient funds to supplement parental savings and thus pay for college expenses. Although financial assistance may supplement parental savings, it does not cover all college expenses. In fact, college expenses such as books and supplies or registration and medical fees are less covered by financial assistance programs than are room and board or tuition expenses. Astin therefore concluded by encouraging
college officials to consider such expenses when awarding monies. In conclusion, he cautioned college officials to be aware that the decision to attend is often based upon the amount of financial assistance awarded by the institutions involved.

Jackson (1982) indicated that the desire to make a wise investment was a primary factor influencing student decisions about college admission. Most students want to enjoy a quality of life better than or at least equal to that of their parents. Some secondary factors this researcher considered were economic and social climates of the home environment. He encouraged professionals in higher education to pay close attention not only to primary factors and their influence on student decision, but also to secondary factors.

Blumenstyk (1992) pointed to the lack of state and federal commitment to welfare reform as a major factor influencing student decisions about college admission. The researcher discussed welfare reform because most states encourage welfare recipients to seek college admission or lose welfare benefits. Although most welfare recipients are willing to seek college admissions as an alternative to their current lifestyle, the author maintained that many states mandating that welfare recipients seek admission or lose benefits have no intention of assisting recipients financially while in college. The federal government and state governments have agreed to pay for tuition and fees, and
individual states to pay for transportation, child care, books, and other school related materials. Yet because of dwindling state dollars and the recession, however, most state governments are unwilling to match funds with the federal government. According to Blumenstyk, welfare reforms will be a major factor influencing traditional as well as nontraditional college student decisions regarding postsecondary education: the number of single heads of households between the college ages of 18 to 22 with dependent children and on welfare now surpasses the number aged 25 and older.

Hansen (1982) pointed to the economic growth rate in the United States and equal access to higher education as primary factors influencing student decisions about seeking college admission. If the economic prosperity of the United States excludes children from families with low socioeconomic levels, then their chances of seeking college admission, compared with the chances of children from moderate-to-high socioeconomic levels will be rather slim.

Perception: Some Potential Factors Perceived by Ethnic Minority Students to Influence Their College Admission

Hansen’s (1982) study regarding economic growth in the United States and equal access to higher education has drawn the attention of many higher education professionals.
Ballesteros (1986) echoed Hansen by stating that if economic prosperity in the United States excludes economically disadvantaged students, then their desire to seek college admission will diminish. He also considered precollege curricula as another major factor influencing disadvantaged students' decisions to apply for college admission. Economically disadvantaged students must be mainstreamed into moderate-to-high-technology jobs if many businesses in the United States are to compete successfully with their international counterparts. By the year 2020, the minority student population will outnumber the nonminority student population 3 to 1, and the presence of the former in the skilled workforce will be imperative. Finally, ethnic minority students born into poverty will benefit tremendously from precollege curricula not only as a means of preparing for industrial employment, but also as a means of increasing understanding of higher education.

The California Postsecondary Education Commission (1986) posited that tutorial assistance in precollege curricula was another major factor influencing ethnic minority student decisions regarding college admission. Often ethnic minority students' academic confidence is low because they have limited basic skills in English, math, and/or science. The Commission therefore encouraged the hiring of tutors to assist such students in subject areas in which competency is required for college entrance. Through small group discussion and
individualized studies, tutors can stimulate ethnic minority students' desire for college education.

Duran (1983), too, stressed that tutorial assistance in precollege programs may be a major factor influencing ethnic minority students' decisions regarding college admission, but maintained that a hospitable high school social climate was as primary a factor. He urged classroom teachers, administrators, and staff in secondary schools to be sensitive to the academic needs and concerns of ethnic minority students. Focusing on the academic needs and concerns of Hispanic students, he emphasized that minority students and nonminority students should be treated equitably.

Along these lines, the Arizona Department of Economic Security (1986) discussed the ability of transitional bilingual programs to influence Hispanic students' decisions regarding college attendance. The Committee concluded that bilingual/bicultural teaching can influence such decisions when students are allowed to express cultural experiences orally or in writing. Thus, bilingual/bicultural teaching encourages Hispanic students in high school to view themselves as individuals with unique characteristics, with the ability to maintain their cultural heritage in a pluralistic society. The Department recommended that public school districts allocate funds to promote bilingual/bicultural teaching strategies among faculty.
In contrast, Attinasi (1986) stressed positive social integration in the university community as the major factor influencing Mexican-American high school seniors' decisions regarding college admission. Most students participating in his study chose not to seek college admission because postsecondary institutions lacked positive social integration of programs and activities for ethnic minority students wishing to maintain cultural identity. Attinasi urged postsecondary institutions to implement socially integrated programs and activities designed to permit maintenance of the cultural identity of Mexican-Americans. He recommended that postsecondary institutions investigate whether the lack of socially integrated programs and activities had negatively influenced Mexican-American postsecondary retention rates.

In his report, Malcolm (1985) discussed federal compensatory educational assistance as a factor influencing not only the decisions regarding college admission among Mexican-American students but also those among African-American, Native-American, Puerto Rican, and Asian-American students. She cited federal compensatory educational assistance as a major factor because it financed public school district investment in the hiring of additional classroom tutors for ethnic minority students demonstrating deficiencies in English, math, history, and/or science. Such federal compensatory educational assistance might influence ethnic minority student decisions regarding college admission by
encouraging students to take advantage of after-school programs in subject areas critical to college entrance. Especially those states whose economies depend upon intensive technological development should seek federal compensatory educational assistance when the ethnic minority student population increases. In this way, talented ethnic minority students' desires to attend college could be nurtured early. Malcolm warned that timely identification of capable students was critical and that after-school programs were needed in the primary grades.

Menstre (1986) highlighted federal financial assistance to Latino students with language proficiency difficulties. He considered such assistance a major factor influencing the desire of these students to attend college. By hiring additional classroom teachers to teach English after school, school administrators reinforce concepts discussed during regular school hours. Menstre encouraged public school districts to seek monies for the purchase of microcomputers because Latino Students are often reluctant, as a result of poor basic skills in both English and problem solving, to seek college admission.

Munoz (1986) focused on academic stress as an influence on Chicano students' desires to attend college. Often Chicano students have poor writing skills. But Munoz maintained that lack of writing confidence is often rooted in faculty members' ignorance of the Chicano cultural identity. Faculty members
should make aggressive efforts to learn more about Chicano culture as a means of helping these students deal with academic stress. Such nonacademic factors as the need to help support family while paying for college may contribute to the low participation of Latinos in higher education. Munoz concluded by emphasizing that higher education programs and activities should involve Chicano students during high school so that they can develop a positive understanding of the university community. He also suggested precollege programs as a means of addressing academic and nonacademic problems for Chicano students.

Lee (1985) maintained that socioeconomic issues such as parental income are preeminent factors influencing African-American and Hispanic students' decisions regarding college admission. In short, when the parental incomes of African-American and Hispanic students are low, applications for college admission among these students are limited. Because the income of many African-American and Hispanic households is too low, regardless of federal assistance, to pay college fees, Lee suggested that many parents encourage children to postpone college education and to seek employment instead, as a means of saving, to pay tuition. These parents might encourage children not only to seek employment after graduation from high school but also to seek college admission at institutions able to grant financial aid. She suggested that the limited access to higher education among African-
American and Hispanic students from families of low socioeconomic levels, compared with the access of children from families of higher socioeconomic levels, may be due to the home environment, e.g., parents' lack of education, rather than to ethnic differences. She suggested that colleges and school districts create precollege programs and activities designed to help. The social factors mentioned by Lee may also contribute to low college participation rates among nonminority students of low socioeconomic status.

Rodriguez (1989) reported that the primary motivation for many students, especially African-American students, to attend college has been getting a job or advancing in a career. Indeed, many African-American students believe that this factor influenced their decisions. Thus collaborative efforts between public school districts and four-year institutions providing educational literature with a multicultural perspective would aid minority student recruitment and retention in higher education. Rodriguez encouraged this teaching approach as a means of inspiring minority students to seek college admission through cultural development and awareness.

Focusing on self-esteem, Mercer (1990) asserted that some African students reject institutions with a poor record in building confidence among minority students. Such factors as whether faculty members have the time to assist students with academic or interpersonal needs is an important student
concern. Rodriguez (1989) therefore recommended that higher education administrators make aggressive efforts to provide an educational environment conducive to self-esteem among African-American students.

Precollege Programs Articulated by Comprehensive Community Colleges and by Public School Districts

Two-year institutions are an important segment of postsecondary education in the United States, and arguably it will become the largest and the most significant.

Two-year institutions can be defined as public or private junior colleges, comprehensive community colleges, two-year branch colleges, or technical institutes, all of which provide at least two but less than four years of college-level work (Vaughan, 1982). Because the literature regarding this topic is limited, from among those precollege programs articulated among two-year institutions, comprehensive community colleges will be the focus of this segment of the chapter.

Fielding (1989) provided an in-depth look at the history and the organization of the Valley Educational Consortium, a long-term ongoing partnership between higher education staff and public school personnel in Oregon. The purpose of this study was to examine how relationship building between higher education staff and public school personnel can lead to improved assessment of the needs of ethnic minority students long before they enroll in the college community. Because
public school teachers and college faculty in many instances are overprotective of their academic turf, it is difficult to address ethnic minority students' academic needs and concerns. Thus, Fielding recommended precollege programs as an activity by which to bring together leadership and expertise of public school teachers and college faculty and to improve assessment of the needs and the concerns of ethnic minority students. Such precollege programs could provide both classroom teachers in public schools and faculty in college communities the opportunity to discuss curricular alternatives.

In view of Fielding's study, Andrews (1988) discussed precollege programs between comprehensive community colleges and public schools as a means of easing anxiety and frustration among ethnic minority students transferring from one educational community to another. The precollege program at Illinois Valley Community College reduced these negative emotions by exposing ethnic minority students to the college community before they had completed high school. Andrews stressed that the success of this program was due to tours held on campus for students, as well as to classroom lectures and school related social events. From among the seven area high schools participating in the study, a majority of faculty members indicated that a precollege program depended upon the cooperation of all parties, e.g., colleges, public schools, and industries. Without professional cooperation, anxiety and frustration will likely continue for many ethnic minority
students attempting to transfer from one educational community to another.

Scott (1985) concluded that the primary purpose of a precollege program should be that of helping students choose career paths during an early stage in life, during approximately their junior year in high school. He examined how the precollege program articulated between a local public school district and a comprehensive community college in California encouraged ethnic minority students to seek college admission. The program was a significant factor in minority student selection of career paths: most of the ethnic minority students participating ultimately selected higher education as the route by which to pursue career goals.

According to Kintzer (1985), precollege programs not only encouraged ethnic minority students in inner cities to seek college admission but also provided them with the opportunity to achieve a higher socioeconomic status than their parents had. Kintzer studied the precollege programs in place between Alexandria, Virginia Public Schools and Northern Virginia Community College and found that all 70 ethnic minority students returned to participate in the precollege program during the second year, with 59 additional ethnic minority students participating for the first time. The increased participation in the precollege program was the result of the program’s dispensing of college credits during high school. That students earned credits in this manner encouraged many to
continue their college education. Moreover, college credits earned with grade "C" and better could be transferred to several colleges in the state if students chose not to attend Northern Virginia Community College. Kintzer considered this another major factor influencing ethnic minority students living in large urban communities to seek college admission.

Lieberman (1986) suggested that comprehensive community colleges and public school districts articulate precollege programs encouraging high-risk students with college potential to seek postsecondary education. The precollege programs administered by LaGuardia Community College in New York have attracted thousand of high-risk students to postsecondary education for the completion of middle-college alternative schools. Lieberman attributed the success of these efforts to the three-way partnership of the New York City Board of Education, the LaGuardia Community College, and the City University of New York. These three institutions of learning tracked high-risk students during their tenth grade and encouraged them to attend college after completing high school. Many had been prepared to quit high school for reasons such as teenage pregnancy. By offering them an education, this collaborative educational effort discouraged many high-risk students from dropping out of secondary school.

Powell (1987) maintained that precollege programs articulated between comprehensive community colleges and public school districts should emphasize peer leadership
development as a means of encouraging high-risk students to seek college admission. She suggested that the success of precollege programs articulated by comprehensive community colleges will depend largely upon the participation of students currently enrolled, who, if successful, make the best salesperson of any college. Peer leadership in students currently enrolled involves helping first semester students adjust. According to Powell, an intensive training course in group dynamics and leadership techniques should be available for leaders.

Milliken (1986) emphasized that the success of precollege programs between comprehensive community colleges and public school districts should involve the business community, inasmuch as many high-risk students chose, not college as a path towards a career, but employment. Precollege programs are excellent alternative activities for those who desire college admission, but some type of pre-employment programs should also be available for students who do not.

Finally, Mabry (1988) pointed out that precollege programs not only provide comprehensive community colleges but also four-year public institutions with the ability to market ethnic minority students.
Precollege Programs Articulated by Four-year Institutions and by Public School Districts

The four-year institution is an important part of society in that it allows students to fulfill their educational aspirations beyond high school. Four-year institutions, as discussed in this section of Chapter 2, are defined as universities and colleges operating under private or public sponsorship (Fuhrmann, 1983). Private institutions may be local, state, or federal. Because the research literature available regarding the topic is limited, this section will focus on publicly sponsored four-year universities.

According to Mabry (1988), precollege programs at four-year public institutions are implemented not only to recruit and to attract ethnic minority students, but also to provide some of the services offered by two-year institutions, including

1. dual or joint student enrollment in public school districts;
2. sharing of resources, e.g., faculty and facilities; and
3. advanced placement for public school students to enroll in college courses and to receive credit.

In conclusion, Mabry stated that the services offered by precollege programs at four-year public institutions help ethnic minority students understand that expectations differ
from one learning environment to another. In other words, precollege programs allow ethnic minority students to recognize the dedication and the integrity required of students by four-year public institutions.

Rodriguez (1989) posited that precollege programs provide ethnic minority students with the opportunity to recognize both the qualifications necessary to succeed at four-year public institutions and to experience enhanced self-esteem through academic achievement. Some economically disadvantaged ethnic minority students lack academic integrity because their self-esteem is low. Rodriguez recommended that precollege programs articulated between four-year public institutions and public school districts create multicultural, gender-free curricula as a means of exposing ethnic minority students to the academic accomplishments of minorities who have completed college.

Keller (1990) maintained that ethnic minority enrollment in colleges could be increased by the provision of precollege programs stressing academic, psychological, and financial aid counseling for students in grades seven through twelve. By tapping into these grade levels early, intervention programs might reach students who in many cases view themselves as unfit for college.

Rambert (1989) suggested that the decline in minority students majoring in education has contributed to the low participation of minorities seeking college admission. He
recommended precollege programs in the public schools to boost minority student enrollment in higher education if role models for minorities are unavailable.

Duren (1989) felt that precollege programs at four-year public institutions should assist ethnic minority students considering college by providing them with cognitive skills in both reading and mathematics. Many precollege programs at four-year public institutions take for granted that most ethnic minority students have already developed such cognitive skills. Duren pointed to the relatively high retention rates for many ethnic minority students completing their education at two-year institutions and cited precollege programs stressing the development of reading skills.

Krajewski (1988) suggested that precollege programs between four-year public institutions and public school districts focus not only on cognitive skills for reading comprehension, but also on time management skills. For example, such skills help students recognize the amount of time required to study successfully compared with that required to interact successfully. According to this researcher, low retention rates among ethnic minority students at four-year public institutions can be attributed to their spending less quality time studying than pursuing relationships.

Ellison (1986) maintained that most ethnic minority students living in urban communities do not seek college
admission because there are insufficient precollege programs articulated between both four-year and comprehensive community colleges and public school districts. He suggested that increasing the number of precollege programs between these educational agencies could provide ethnic minority students with career and financial aid counseling.

In Maeroff's (1982) opinion, precollege programs should be used to help ethnic minority students not only with career planning and financial aid, but also with mathematics and science comprehension. Maeroff suggested that minority students are swayed from majoring in mathematics or science related fields, e.g., engineering and computer science, because their confidence to pursue these careers is not upbuilt and because they lack basic skills. According to Maeroff, precollege programs between four-year public institutions and public school districts could help dispel the widespread notion that ethnic minority students lack the ability to major in professional areas. Precollege programs must and should focus on improving ethnic minority students' basic skills in mathematics and science through career counseling.

Like Maeroff, Boyles (1983) felt that precollege programs articulated between four-year public institutions and public school districts should focus on improving ethnic minority students' basic skills in mathematics and science. Decreases in the number of ethnic minority students majoring in the
allied health fields, e.g., nursing, medical technology, and physical therapy, are due to the group's generally poor basic skills in mathematics and science. According to Boyles, therefore, minority underrepresentation in allied health programs will continue until precollege programs address these students' academic deficiencies.

According to Hixson (1982), college programs should stress not only improvement of mathematics and science basic skills but also campus and community bonding. In his opinion, the success of precollege programs begins with the support of the community served by the institution. Such support could be reflected in financial donations or in the use of public facilities. Hixson encouraged precollege programs, regardless of institution, to incorporate as many community resources as possible.

Along these lines, Guadiani (1986) pointed out that precollege programs foster community bonding not only among college and public school administrators and faculty, but also among volunteers. He indicated the growing demand from parents, administrators, and faculty to take active leadership roles in improving the quality of education in four-year public institutions and public school districts. This volunteerism has broadened the spectrum of precollege programs, strengthening the image of an inclusive educational system.
In Fortune's (1986) view, the best means of improving the quality of education from the primary grades through college is partnership-type precollege programs articulated between all institutions of learning, e.g., primary schools, secondary schools, and colleges. When one institution fails to foster quality education for its students, then all institutions of learning fail unless the momentum among parents, faculty, and elected officials depends upon more than one institution.

Trubowitz (1984) stressed precollege programs as a means of helping institutions of learning reevaluate their commitments to improving education. Precollege programs articulated among four-year public institutions and public school districts can improve the quality of education by allowing faculty to teach certain courses, e.g., math and science, for additional wages, thereby bridging to a small extent the chasm between the wages of these professionals and those of, for example, doctors or lawyers.

Likewise, Goldberg (1987) pointed to the capacity of precollege programs articulated between four-year public institutions and public school districts to provide faculty members with additional monetary compensation by way of teaching or administration hours. Moreover, precollege programs offer the possibility of research to faculty members. Goldberg encouraged federal and state governments to increase grant monies so that faculty members at four-year public institutions and public school districts can earn more.
Cross (1976) cited the importance of curricular cohesiveness. She posited that the quality of education must begin with educators' reshaping curricula to meet the academic and personal needs of students. She urged that curricula address not only the needs of gifted and talented students planning to attend college, but also those of moderate-to-high risk students as well. For example, precollege programs can help introduce faculty members to alternative teaching methods such as those employing telecommunications, which motivate gifted and talented students as well as moderate-to-high risk students.

**Summary**

As we have seen, precollege programs can serve as powerful vehicles increasing the pool of ethnic minority students seeking college admission. As a result of precollege programs articulated by both comprehensive community colleges and four-year public institutions with various public school districts, ethnic minority students across the nation have been challenged to extend their educational aspirations beyond high school.

But too many ethnic minority students with no educational aspirations beyond secondary school are yet to be served by precollege programs. According to Ellison (1986), the college enrollment rate of ethnic minority students could be increased if precollege programs were made available to every segment of
society. Charting the success of the longest running federally funded precollege program, Upward Bound, Hawkins (1993) maintained that ethnic minority student enrollment in college communities has increased since 1965 partly because of the positive role that the federal government has played in trying to motivate students of the first generation to seek college admission regardless of their socioeconomic backgrounds. In that researcher's opinion, ethnic minority students can be challenged to seek college admission upon graduation from high school despite the social and economic disadvantages most encounter during the primary grades.

As the literature review has suggested, many successful outcomes have resulted from precollege programs encouraging ethnic minority students to seek college admission. The purpose of this study is to examine the perceptions of ethnic minority students enrolled in such a precollege program (College Bound/Images) regarding the programs' influence on their decisions to seek or not to seek college admission.
CHAPTER THREE: METHODOLOGY

The survey research design used for this study consisted of a mailed questionnaire to students currently enrolled in the College Bound/Images Program. The research design and its application were approved by committee members for the Iowa State University Human Subjects Board. Chapter Three will consider 1) study design, 2) sample population, 3) instrument development, 4) survey procedures, 5) treatment data, 6) data analysis, and 7) statistical procedures.

Design of the Study

Three groups of ethnic minority students were used in this study. Group 1 consisted of sixth to twelfth graders in the College Bound/Images Program at Iowa State University. Group 2 consisted of sixth to twelfth graders in the College Bound/Images Program at the University of Iowa. Group 3 consisted of sixth to twelfth graders in the College Bound/Images Program at the University of Northern Iowa. All respondents were classified as either academically marginal or academically at-risk ethnic minority students.

Borg and Gall (1989) referred to true experimental designs whereby subjects are randomly assigned. The design of this study was quasi-experimental in that students were not randomly assigned to groups before the treatment, i.e., before
participating in the College Bound/Images Program at their respective Regents institutions.

The question of internal validity was considered. Threats to the internal validity of a study occur because of a failure to control for various factors. According to Borg and Gall, major threats to the internal validity of a study are related to history, maturation, mortality, and differential group selection. Before the study began, there was no assurance that the students participating in the College Bound/Images Programs at the three Regents institutions exhibited any similarities. Therefore, effects of the treatment cannot be attributed clearly and precisely to the College Bound/Images Program at the three Regents institutions.

Three important steps were taken to control the differential group selection problem. Present grade level, gender, and ethnicity were three background variables of the College Bound/Images Program participants.

According to Borg and Gall's explanation of external validity, the results of a study can be generalized to a larger population to some degree, and the findings from a study can be generalized to similar populations such as those of like geography. Borg and Gall stressed that random selection of a sample from a population permits an especially useful generalization from the sample to the population. In this study, the College Bound/Images Program included all
students enrolled from August 1992 to September 1993. Obviously, one can generalize from these three groups only to the extent that they are similar to the group or groups of ultimate concern.

Programming selections as well as philosophical viewpoints of College Bound/Images Programs differ from one college to another. Therefore, only limited generalizations of the results of this study can be made.

Subjects of the Study

Each subject was placed in one of three groups. The first was composed of 150 ethnic minority students attending Iowa State University's College Bound/Images Program. The second was composed of 150 ethnic minority students attending the University of Iowa's College Bound/Images Program. The third was composed of 150 ethnic minority students attending the University of Northern Iowa's College Bound/Images Program. Every student currently enrolled in the College Bound/Images Program received a questionnaire. Of the 450 students receiving a questionnaire, 233 returned none. A follow-up telephone call was not made to students who did not return questionnaires to the investigator on or by December 7, 1992. Students' home phone numbers were not made available due to policies and procedures regarding confidentiality as stated by the Regents institutions.
Development of the Study

Data were collected from a survey mailed to students enrolled in the College Bound/Images Program from August 1992 to June 1993. The questionnaire had been developed by the investigator to characterize student perceptions of College Bound/Images as a means of increasing the pool of ethnic minority students seeking college admission.

The instrument consisted of six parts, with an introduction page. Part I contained questions about personal characteristics; Part II, questions about College Bound; Part III, questions about financial concerns; Part IV, question about parents' education backgrounds. There was a total of 35 question. Students were asked to rate the importance of a given reason on a seven-point scale ranging from 1) strongly agree to 7) strongly disagree for question in Parts II and III. Questions in Parts IV and V asked student to rank their choices by using numbers 1 through 5, with 1 representing their first choice, and 5 their fifth, etc. Students were asked to circle the answers best representing their choices for questions in Parts I and VI. There were two open-closed discussion questions provided for students regarding how College Bound/Images Programs have helped them as students and to describe or discuss other concerns they may have about the College Bound/Images Program.

To determine reliability of the instrument, a pretest was administered to 67 students enrolled in the College
Bound/Images Program at Iowa State University during April 1991. All 67 students completed and returned the questionnaires, with nearly 97% of their responses being consistent with one another. The validity of the instrument was determined as acceptable on the basis of reviews by two experts in the field and by one statistician.

Survey Procedures

In fall 1992, the instrument was mailed to 150 students in the College Bound/Images Program at each Regents institution (see Appendix E). A letter of introduction and an explanation of the investigation were sent to program directors and parents (see Appendix G).

The 150 students at each Regents institution were randomly selected by the respective program directors. The program director at each used a systematic cluster procedure consisting of grouping all students currently enrolled in the College Bound/Images Programs into two major groups at their respective institution.

The two groups consisted of males and females. The groups were then divided into nine separate subgroups depending upon the current grade levels of males and females enrolled in the College Bound/Images Program at each Regents institution. The nine subgroups for males and females were each divided into ten subgroups according to the ethnic background of students.
The statistical procedures used for data analysis in this study included T-tests, crosstabs, one-way, and two-way analyses of variance.

The T-test was used to analyze the relation between gender and student perceptions of College Bound as a means of encouraging ethnic minorities to attend college. The T-test was also used to analyze the relation between gender and both educational aspirations and perceptions regarding financing college.

A crosstab testing was administered to analyze the relation between parents' educational backgrounds and students' college aspirations, by ethnic background, grade level, and gender. It also was used to analyze the relations, by grade level, ethnic background, and gender according to students' perceptions regarding type of college to attend after completing high school, enrichment/academic programs and activities offered by College Bound/Images, and financing college expenses.

The two-way analysis of variance was used to analyze the relations, by ethnic background, grade level, and gender, between length of time spent in College Bound/Images and perceptions regarding the program's ability to increase ethnic minority attendance of college.

One-way analyses of variance were administered to analyze the relation between the extent to which students perceived College Bound/Images as a means of encouraging ethnic
minorities to attend college, by both grade level and ethnic background.

A one-way analysis of variance was conducted to characterize the relations among the educational aspirations of College Bound/Images students by both grade level and ethnic background.

The final one-way analysis of variance examined the relation between ethnic background and perceptions about the financing of college expenses.

A five percent confidence limit was established to interpret the significance of statistical test results.
CHAPTER FOUR: RESULTS AND DISCUSSION

Introduction

This research project was designed to investigate factors potentially influencing student perceptions of College Bound/Images as a precollege program to increase the pool of ethnic minorities seeking admission at Iowa's regents institutions. Chapter Four is composed of five sections: the first examines research questions 5, 7, and 12; the second examines research questions 1, 2, 3, 4, 6, 8, 9, 10, 11, 13, and 14; the third examines research questions 1, 2, 3, 4, 6, 7, 13, and 14; the fourth examines research questions 15, 16, and 17; and the final section examines open-closed discussion questions.

Of the 450 questionnaires mailed, 217 (48.23%) were completed and returned to the primary investigator on or by December 7, 1992. Seventy-five of the 150 questionnaires mailed to students by the director were returned on behalf of the College Bound/Images' Program at Iowa State University. Of the 150 questionnaires mailed by the director of College Bound/Images at the University of Iowa, 71 were returned on behalf of the Program. Seventy-two questionnaires of the 150 mailed to students by the director were returned on behalf of the College Bound/Images Programs at the University of Northern Iowa.
Statistical Analyses

T-Test analysis

A T-Test was used to test the mean differences among research questions 5, 7, and 12. The level of significance used to test all research questions in Sections 1, 2, 3, and 4 was .05. In Section 5, student responses to the open/closed discussion questions were hand recorded and categorized by subject. No statistical test was used for this section of the research project. The research questions examining student mean scores, either pooled or separated by gender, are as follows.

RQ5 To what extent do students differ by gender in their perceptions of enrichment/academic programs and activities offered by College Bound/Images to inspire ethnic minorities to attend college?

RQ7 To what extent do students differ by gender in their perceptions of the importance of educational aspirations to the seeking of college admission?

RQ12 To what extent do students differ by gender in terms of their perceptions regarding college financing?

The statistical analysis for research question 5 in Tables 1 and 2 reveals significant mean differences in terms of two College Bound/Images concerns among student mean scores either pooled or separated by gender. As presented in Tables 1 and 2, of the nine questions broken down by gender, two significant mean differences exist among student mean scores
either pooled or separated by gender. Questions (7) without data (no significant mean differences among student mean scores either pooled or separated by gender) are as follows.

RQ5 (1) By gender, College Bound/Images Programs should be offered to increase the pool of ethnic minority students eligible for college admission (differences not significant).

RQ5 (2) By gender, College Bound/Images Programs give students the opportunity to visit college campuses and to interact with the college community (differences not significant).

RQ5 (3) By gender, College Bound/Images Programs encourage ethnic minority students to attend college (differences not significant).

RQ5 (4) By gender, College Bound/Images Programs strengthen students' self-esteem (differences not significant).

RQ5 (5) By gender, College Bound/Images Programs provide students with enrichment activities related to mathematics (differences not significant).

RQ5 (6) By gender, College Bound/Images Programs provide students with enrichment activities related to science (differences not significant).

RQ5 (7) By gender, College Bound/Images Programs provide students with enrichment activities related to language arts, English, and writing (differences not significant).
Table 1. Students' mean scores pooled or separated, by gender

College Bound/Images Programs provide students with the opportunity to interact and meet other students that have the desire to attend college.

<table>
<thead>
<tr>
<th>Gender of students</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t value</th>
<th>Level of Significance</th>
<th>Separate Variance</th>
<th>Separate Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>82</td>
<td>1.0976</td>
<td>.299</td>
<td>-2.00</td>
<td>.047</td>
<td>-2.26</td>
<td>.025</td>
</tr>
<tr>
<td>Female</td>
<td>135</td>
<td>1.2222</td>
<td>.513</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 confidence level.

Table 2. Students' mean scores pooled or separated, by gender

College Bound/Image Programs provide students with enrichment activities related to cultural events, e.g. concerts, plays, operas.

<table>
<thead>
<tr>
<th>Gender of Students</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>t value</th>
<th>Level of Significance</th>
<th>Separate Variance</th>
<th>Separate Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
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<td>1.1098</td>
<td>.416</td>
<td>-1.96</td>
<td>.051</td>
<td>-2.20</td>
<td>.029</td>
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<tr>
<td>Female</td>
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<td>1.2741</td>
<td>.605</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 confidence level

The two questions (8 and 9) listed above provide data support for Tables 1 and 2. The tables discuss information regarding the perception of male (82) and female (135) students.

Between males (82) and females (135), there were significant differences for two College Bound/Images concerns, namely whether such programs provide students with the opportunity to interact and to meet other students with the desire to attend college and whether such programs provide
students with enrichment activities related to cultural events, e.g., concerts, plays, and operas (see Tables 1 and 2). Surprisingly, female students' average mean scores (1.2222 and 1.2741) were higher than male students' (1.0976 and 1.1098) (see Tables 1 and 2). The levels of significance (.047, .025, .051, and .029) in Tables 1 and 2 when male and female students' mean scores were grouped together (pooled variance) or individually grouped (separate variance) represent significant mean differences between genders.

The statistical analysis for research question 7 indicates no significant mean differences in terms of college aspiration among students' mean scores either pooled or separated by gender. Because no significant mean differences exist between student mean scores either pooled or separated by gender, a table diagram will not be used to describe data.

The questions (5) without data support (no significant mean difference between student mean scores either pooled or separated by gender) are as follows:

RQ7 (1) By gender, to fulfill parental expectations (differences not significant).

RQ7 (2) By gender, to have a better selection of jobs (differences not significant).

RQ7 (3) By gender, to obtain greater knowledge of a specific technical field that will improve the chances of getting a job of interest (differences not significant).
RQ7 (4) By gender, to become motivated culturally about societal values and ideals (differences not significant).

RQ7 (5) By gender, to make more money than parents and other family members do (differences not significant).

The statistical analysis for research question 12 suggests no significant mean differences in terms of methods of college financing among student mean scores either pooled or separated by gender. Because no significant mean differences between student mean scores either pooled or separated by gender exist, a table diagram is not used to describe data.

Questions (7) without data support are as follows:
RQ12 (1) By gender, parental or family savings will help pay for college expenses (differences not significant).

RQ12 (2) By gender, the students' personal savings will help pay for college expenses (differences not significant).

RQ12 (3) By gender, financial gifts from relatives will help pay for college expenses (differences not significant).

RQ12 (4) By gender, student loans will help pay for college expenses (differences not significant).

RQ12 (5) By gender, scholarships and grants will help pay for college expenses (differences not significant).
RQ12 (6) By gender, earnings from part-time employment while the student attends college will help pay for college expenses (differences not significant).

RQ12 (7) By gender, earnings from full-time employment while the student attends college will help pay for college expenses (differences not significant).

Crosstab analysis

This section describes crosstabs, which were used to test both observed and expected scores for research questions 1, 2, 3, 4, 6, 8, 9, 10, 11, 13, and 14. The research questions examining students’ observed and expected scores, by race, gender, present grade level, and parental educational level follow.

RQ1 How do students differ, by grade level, in terms of their perceptions of the best type of college to attend upon high school graduation?

RQ2 How do students differ, by grade level, in terms of their perceptions of enrichment/academic programs, and activities offered by College Bound/Images to inspire ethnic minorities to attend college?

RQ3 How do students differ, by ethnic background, in terms of their perceptions of enrichment/academic programs and activities offered by College Bound/Images to encourage ethnic minorities to attend college?
RQ4 How do students differ, by ethnic background, in terms of their perceptions of the best type of college to attend upon graduation from high school?

RQ6 How do students differ, by grade level, in terms of their perceptions of the importance of educational aspirations to college admission?

RQ8 How do students differ, by ethnic background, in terms of their perceptions of the importance of educational aspirations to college admission?

RQ9 How do students differ, by grade level, in terms of the effect that their parents' educational backgrounds have on their own college aspirations?

RQ10 How do students differ, by ethnic background, in terms of the effect that their parents' educational backgrounds have on their own college aspirations?

RQ11 How do students differ, by gender, in terms of the effect that their parents' educational backgrounds have on their own college aspirations?

RQ13 To what extent do students differ, by ethnic background, in terms of their perceptions of college financing?

RQ14 To what extent do students differ, by grade level, in terms of their perceptions of college financing?

The statistical analysis for research question 1 in Table 3 describes significant differences in terms of college choice between students' observed and expected scores, by present grade level. Of the four questions ranked by students of
Table 3. Students' observed and expected scores, by present grade level

<table>
<thead>
<tr>
<th>College choices/community college, e.g., observed score/expected score</th>
<th>6th</th>
<th>7th</th>
<th>8th</th>
<th>9th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Choice</td>
<td>0</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>4</td>
<td>2</td>
<td>8</td>
<td>34</td>
</tr>
<tr>
<td>Choice</td>
<td>.9</td>
<td>5.0</td>
<td>4.2</td>
<td>5.3</td>
<td>5.6</td>
<td>6.1</td>
<td>6.7</td>
<td>15.7%</td>
</tr>
<tr>
<td>Second Choice</td>
<td>6</td>
<td>26</td>
<td>18</td>
<td>23</td>
<td>31</td>
<td>37</td>
<td>34</td>
<td>175</td>
</tr>
<tr>
<td>Choice</td>
<td>4.8</td>
<td>25.8</td>
<td>21.8</td>
<td>27.4</td>
<td>29.0</td>
<td>31.5</td>
<td>34.7</td>
<td>80.6%</td>
</tr>
<tr>
<td>Third Choice</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Choice</td>
<td>.1</td>
<td>.4</td>
<td>.4</td>
<td>.5</td>
<td>.5</td>
<td>.5</td>
<td>.6</td>
<td>1.4%</td>
</tr>
<tr>
<td>Fourth Choice</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Choice</td>
<td>.1</td>
<td>.7</td>
<td>.6</td>
<td>.8</td>
<td>.8</td>
<td>.9</td>
<td>1</td>
<td>2.3%</td>
</tr>
<tr>
<td>Column Total</td>
<td>6</td>
<td>32</td>
<td>27</td>
<td>34</td>
<td>36</td>
<td>39</td>
<td>42</td>
<td>217</td>
</tr>
<tr>
<td></td>
<td>2.8%</td>
<td>14.7%</td>
<td>12.4%</td>
<td>15.7%</td>
<td>16.6%</td>
<td>18.0%</td>
<td>19.8%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level
Pearson Value
Chi-Square


different present grade levels, one question, as presented in Table 3, elicits significant differences between students' observed and expected scores, by present grade level. The questions (3) without data support (no significant differences between students' observed and expected scores), by present grade level, are as follows:

RQ1 (1) In terms of present grade level, university or four-year college (difference not significant).

RQ1 (2) In terms of present grade level, business college (difference not significant).

RQ1 (3) In terms of present grade level, technical or vocational college (difference not significant).
One question (4) describing significant differences between students' observed and expected scores, by present grade level, has data support from Table 3. Approximately 81% of students surveyed, by present grade level, ranked community college as their second choice of college to attend upon high school graduation. Nearly 15.7% ranked it their first choice. Between students' observed and expected scores, by present grade level, there were significant differences in terms of attitude towards community colleges.

Seventh (6), eighth (7), ninth (7), and twelfth (8) graders ranked community college their first choice (5.0%-seventh, 4.2%-eighth, 5.3%-ninth, and 6.7%-twelfth, respectively). The other present grade levels ranked it their first choice less frequently than expected.

Twenty-three ninth graders ranked community college as their second choice—a figure somewhat smaller than expected (27.4%). Other present grade levels ranked it moderately low to high, as their second choice.

Presented in Table 4, the statistical analysis for research question 4 indicates significant differences in terms of college choice between students' observed and expected scores, by ethnic backgrounds. Of the four questions ranked by students of different ethnic backgrounds, one question elicited significant differences between observed and expected scores. The questions (3) without data support (no
Table 4. Students' observed and expected scores, by ethnic background

<table>
<thead>
<tr>
<th>College choices/university or four-year college, e.g., observed score/expected score</th>
<th>Rat- ings</th>
<th>Afri- can Am.</th>
<th>Na- tive Am.</th>
<th>Asian- nic</th>
<th>Hispa- nic</th>
<th>La- tino</th>
<th>Chi- cano</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>125</td>
<td>35</td>
<td>7</td>
<td>10</td>
<td>5</td>
<td>0</td>
<td>182</td>
<td></td>
</tr>
<tr>
<td>Choice</td>
<td>120.2</td>
<td>37.6</td>
<td>7.5</td>
<td>10.9</td>
<td>4.2</td>
<td>.8</td>
<td>83.5%</td>
<td></td>
</tr>
<tr>
<td>Second Choice</td>
<td>19</td>
<td>10</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Column</td>
<td>144</td>
<td>45</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>1</td>
<td>218</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>132</td>
<td>66.1%</td>
<td>20.6%</td>
<td>4.1%</td>
<td>6.0%</td>
<td>2.3%</td>
<td>.5%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level

<table>
<thead>
<tr>
<th>Pearson Value</th>
<th>Chi-Square</th>
<th>DF</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.933344</td>
<td>5</td>
<td>.03039</td>
<td></td>
</tr>
</tbody>
</table>

significant differences between students' observed and expected scores, by ethnic background) are as follows:

RQ4 (1) In terms of ethnic background, community college (differences not significant).

RQ4 (2) In terms of ethnic background, business college (differences not significant).

RQ4 (3) In terms of ethnic background, technical or vocational college (differences not significant).

The question (4) with data support in Table 4 follows. Nearly 84% of students surveyed, by ethnic background, ranked university or four-year college their first choice for higher education. Approximately 17% of students ranked it their second choice. There were significant differences in terms of choosing university or four-year college between students' observed and expected scores, by ethnic background. Thirty-
five Native-American students ranked it their first choice, less frequently than expected (37.6%). Other ethnic groups ranked it somewhat low to high, as their first choice. Nineteen African-American students ranked it their second choice, less frequently than expected (23.8%). Other ethnic groups ranked it moderately low to high, as their second choice.

The statistical analysis for question 2 identifies no significant differences in terms of program concerns between students' observed and expected scores, by present grade level. Because no significant differences between observed and expected scores, by grade level, exist, a table is not used. Questions (9) without data support follow.

RQ2 (1) In terms of present grade level, College Bound/Images Programs should be offered to increase the pool of ethnic minority students eligible for college admission (differences not significant).

RQ2 (2) In terms of present grade level, College Bound/Images Programs provide students with the opportunity to interact with and to meet other students with the desire to attend college (differences not significant).

RQ2 (3) In terms of present grade level, College Bound/Images Programs give students the opportunity to visit college campuses and to interact with the college community (differences not significant).
RQ2 (4) In terms of present grade level, College Bound/Images Programs encourage ethnic minority students to attend college (differences not significant).

RQ2 (5) In terms of present grade level, College Bound/Images Programs strengthen students' self-esteem (differences not significant).

RQ2 (6) In terms of present grade level, College Bound/Images Programs provide students with enrichment activities related to mathematics (differences not significant).

RQ2 (7) In terms of present grade level, College Bound/Images Programs provide students with enrichment activities related to science (differences not significant).

RQ2 (8) In terms of present grade level, College Bound/Images Programs provide students with enrichment activities related to language arts, English, and writing (differences not significant).

RQ2 (9) In terms of present grade level, College Bound/Images Programs provide students with enrichment activities related to cultural events, e.g., concerts, plays, and operas (differences not significant).

The statistical analysis for research question 3 in Table 5 identifies significant differences in terms of one College
Bound/Images concern between students' observed and expected scores, by ethnic background. Of the nine questions rated by students of different ethnic backgrounds, one question (see Table 5) elicits significant differences between students' observed and expected scores, by ethnic background. The questions (8) without data support (no significant differences between students' observed and expected scores, by ethnic background) are as follows:

RQ3 (1) In terms of ethnic background, College Bound/Images Programs should be offered to increase the pool of ethnic minority students eligible for college admission (differences not significant).

RQ3 (2) In terms of ethnic background, College Bound/Images Programs give students the opportunity to visit college campuses and to interact with the college community (differences not significant).

RQ3 (3) In terms of ethnic background, College Bound/Images Programs encourage ethnic minority students to attend college (differences not significant).

RQ3 (4) In terms of ethnic background, College Bound/Images Programs strengthen students' self-esteem (differences not significant).

RQ3 (5) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to mathematics (differences not significant).
RQ3 (6) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to science (differences not significant).

RQ3 (7) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to language arts, English, and writing (differences not significant).

RQ3 (8) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to cultural events, e.g., concerts, plays, and operas (differences not significant).

The question (9) with data support appears in Table 5. Nearly 85% of students of different ethnic backgrounds strongly agreed that College Bound/Images Programs provide students with the opportunity to interact with and to meet other students with the desire to attend college.

Additionally, 13.3% of students agreed somewhat with the statement. African-American students were especially likely to feel that the programs were somewhat useful. There were significant differences between students' observed and expected scores, by ethnic background. Of the 41 Native-American students, 38.2% strongly agreed with this statement. But only .8% of the Chicanos strongly agreed with the statement. Of the African American students, 22.2% strongly agreed.
Table 5. Students’ observed and expected scores, by ethnic background

To provide students with the opportunity to interact with and meet other students with the desire to attend college in the future, e.g., observed score/expected score

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly</td>
<td>121</td>
<td>41</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>185</td>
</tr>
<tr>
<td>Agree</td>
<td>22.2</td>
<td>38.2</td>
<td>7.6</td>
<td>11.0</td>
<td>4.2</td>
<td>.8</td>
<td>1</td>
<td>84.9%</td>
</tr>
<tr>
<td>Agree</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>13.3%</td>
</tr>
<tr>
<td>Agree</td>
<td>2</td>
<td>.6</td>
<td>.1</td>
<td>.2</td>
<td>.1</td>
<td>0</td>
<td>3</td>
<td>1.4%</td>
</tr>
<tr>
<td>Undecided</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>.5%</td>
</tr>
<tr>
<td>Column Total</td>
<td>144</td>
<td>45</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>1</td>
<td>218</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level
Pearson Value 29.33570
Chi-Square Significance .04443

Other ethnic groups who strongly agreed rated it low to a modest high. The 22 African-American students who agreed somewhat rated it higher than expected (19.2%). Other ethnic groups who agreed somewhat rated the statement moderately low to moderately high (13.3%). Other ethnic groups who agreed somewhat rated the statement moderately low to moderately high.

The statistical analysis for research question 6 in Table 6 indicates significant differences in terms of one college aspiration between students’ observed and expected scores, by present grade level. Of the five questions ranked by students of different grade levels, one question (see Table 6) elicited
significant differences between students' observed and expected scores. The questions (4) without data support (no significant differences between students' observed and expected scores, by present grade level) are as follows:

RQ6 (1) In terms of present grade level, to fulfill my parents' expectations (differences not significant).

RQ6 (2) In terms of present grade level, to obtain greater knowledge of a specific technical field that will improve my chances of getting a job that interests me (differences not significant).

RQ6 (3) In terms of present grade level, to become culturally motivated about societal values as well as about ideas (differences not significant).

RQ6 (4) In terms of present grade level, to make more money than is made by my parents and other family members (differences not significant).

The question (5) with data support is presented in Table 6. Fifty-nine percent of students of different grade levels ranked an improved job selection as their first reason for having college aspirations.

Generally speaking, the older the child was, the more likely it was that he or she would consider improved job selection an important motivating factor for attending college. Only a very small percentage ranked this motivating factor a relatively unimportant one.
Table 6. Students' observed and expected scores, by present grade level

| College aspirations/better job selection with college degree, e.g., observed score/expected score |
|----------------------------------|---|---|---|---|---|---|---|---|---|
| Rank- | 6th | 7th | 8th | 9th | 10th | 11th | 12th | Row Total |
| ings  |  |   |   |   |   |   |   |   |
| First  | 4  | 20 | 16 | 17  | 23  | 24  | 24  | 128  |
| Choice | 3.5 | 18.9 | 15.9 | 20.1 | 21.2 | 23.0 | 25.4 | 59.0% |
| Second | 1  | 11 | 9  | 9  | 6  | 7  | 10  | 53  |
| Choice | 1.5 | 7.8 | 6.6 | 8.3 | 8.8 | 9.5 | 10.5 | 24.4% |
| Third  | 0  | 1  | 2  | 8  | 7  | 8  | 9   | 35  |
| Choice | 1.0 | 5.2 | 4.4 | 5.5 | 5.8 | 6.3 | 6.9 | 16.1% |
| Fourth | 1  | 0  | 0  | 0  | 0  | 0  | 0   | 1   |
| Choice | 0  | .1 | .1 | .2 | .2 | .2 | .2  | .5% |
| Column Total | 6 | 32 | 27 | 34 | 36 | 39 | 43 | 217 |
|   | 2.8% | 14.7% | 12.4% | 15.7% | 16.6% | 18.0% | 19.8% | 100.0% |

.05 Confidence Level
| Pearson Value | 48.05926 |
| Chi-Square DF | 18 |
| Significance | .00015 |

Additionally, 24.4% of students ranked it their second most important reason. Somewhat more than 16% ranked it their third, and .5% ranked it their fourth.

Seventeen ninth-graders ranked it somewhat less frequently as their first choice than expected (20.1%).

Other grade level groups ranked it moderately low to moderately high, as their first reason. Tenth (6) graders ranked it their second choice somewhat less frequently than expected (8.8%). Other grade level groups, ranked it their second choice somewhat low to a bit more frequently than expected. Seventh (1) and eight (2) graders ranked it as their third most important reason somewhat less frequently than expected (5.2% of seventh graders and 4.4% of eighth
grades). Other grade level groups ranked it as their third reason somewhat less to more frequently than expected.

The statistical analysis for research question 8 elicits no significant differences in terms of college aspirations between students' observed and expected scores, by ethnic background. Because there were no significant differences by ethnic background, a table diagram will not be used to describe data. Questions (5) without data support are as follows:

RQ8 (1) In terms of ethnic background, to fulfill my parents' expectations (differences not significant).

RQ8 (2) In terms of ethnic background, to have an improved selection of jobs (differences not significant).

RQ8 (3) In terms of ethnic background, to obtain greater knowledge of a specific technical field that will improve my chances of getting a job that interests me (differences not significant).

RQ8 (4) In terms of ethnic background, to become culturally motivated about societal values and ideals (differences not significant).

RQ8 (5) In terms of ethnic background, to make more money than my parents and other family members do (differences not significant).

The statistical analysis for research question 9 in Tables 7 and 8 elicits significant differences in terms of reasons for college aspirations between students' observed and
expected scores, by both present grade level and fathers' educational level. Two of the five questions regarding college aspirations elicit significant differences, by present grade level of students and by fathers' educational level. The questions (3) without data support (no significant differences between students' observed and expected scores, by present grade level and by fathers' educational level, are as follows:

RQ9 (1) In terms of present grade level and father's educational level, to fulfill parental expectations (differences not significant).

RQ9 (2) In terms of present grade level and father's educational level, to obtain greater knowledge of a specific technical field that will improve my chances of getting a job that interests me (differences not significant).

RQ9 (3) In terms of present grade level and father's educational level, to make more money than my parents and other family members do (differences not significant).

The two questions (4 and 5) with data support are presented in Tables 7 and 8. The twenty students (100%) whose fathers have college degrees ranked better selection of jobs as their most important reason for having college aspirations.
### Table 7. Fathers' educational level/college degree

College aspirations/to have a better job selection with college degree, students' observed and expected scores by present grade level, e.g., observed score/expected score

<table>
<thead>
<tr>
<th>Rankings</th>
<th>6th</th>
<th>7th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Choice</td>
<td>7.7</td>
<td>30.8</td>
<td>31</td>
<td>15.4</td>
<td>55.0%</td>
<td>65.0%</td>
</tr>
<tr>
<td>Second</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Choice</td>
<td>33.3</td>
<td>66.7</td>
<td></td>
<td></td>
<td>15.0%</td>
<td></td>
</tr>
<tr>
<td>Third</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>15.0%</td>
</tr>
<tr>
<td>Choice</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fourth</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Choice</td>
<td>100.0%</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>20.0%</td>
</tr>
<tr>
<td>Column</td>
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<td>2</td>
<td>4</td>
<td>11</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>5.0%</td>
<td>10.0%</td>
<td>20.0%</td>
<td>55.0%</td>
<td>10.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level

<table>
<thead>
<tr>
<th>Pearson</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>26.24707</td>
</tr>
<tr>
<td>DF</td>
<td>12</td>
</tr>
<tr>
<td>Significance</td>
<td>.00990</td>
</tr>
</tbody>
</table>

### Table 8. Fathers' educational level/college degree

College aspirations/to become culturally motivated about society, students' observed and expected scores by present grade level, e.g., observed score/expected score

<table>
<thead>
<tr>
<th>Rankings</th>
<th>6th</th>
<th>7th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Second</td>
<td>1</td>
<td></td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Choice</td>
<td>100</td>
<td></td>
<td>20</td>
<td>40</td>
<td>20</td>
<td>55.0%</td>
</tr>
<tr>
<td>Third</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>9</td>
<td>45.0%</td>
</tr>
<tr>
<td>Choice</td>
<td>11.1</td>
<td>33.3</td>
<td>44.4</td>
<td>11</td>
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<td>25.0%</td>
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<td>Fifth</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>11</td>
<td>2</td>
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</tr>
<tr>
<td>Choice</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column</td>
<td>15.0%</td>
<td>10.0%</td>
<td>20.0%</td>
<td>55.0%</td>
<td>10.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level

<table>
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<tr>
<th>Pearson</th>
<th>Chi-Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
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<td>DF</td>
<td>12</td>
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<tr>
<td>Significance</td>
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</table>
There were significant differences between students' observed and expected scores, by present grade level and by fathers' educational level.

The seventh (1) and twelfth (2) graders ranked this reason as their first choice a little less frequently than expected (7.7%-seventh and 15.4%-twelfth). Other grade level groups ranked it as their primary reason for having college aspirations somewhat less frequently than expected.

Regarding the aspiration to become culturally motivated about society, 45% of students, by present grade level who had fathers with college degrees ranked this their fifth most important reason for having aspirations; 25% ranked it their third or fourth choices. The eleventh graders (5) ranked the reason their third, fourth, and fifth most important, somewhat higher than the other grade levels did. Other present grade levels ranked it their third and fourth most important reason for college aspirations less frequently.

The statistical analysis for research question 9 in Tables 9, 10, and 11 describes significant differences in terms of college aspirations between students' observed and expected scores, by present grade level and by mother's educational level. Of the five questions regarding college aspirations, three elicit significant differences, by present grade level and by mother's educational level. The questions (2) without data support (no significant differences between
students' observed and expected scores, by present grade level and by mother's educational level) are as follows:

RQ9 (1) In terms of present grade level and mother's educational level, to fulfill parental expectations (differences not significant).

RQ9 (2) In terms of present grade level and mothers' educational level, to make more money than parents and other family members do (differences not significant).

The three questions (3, 4, and 5) that have data support are presented in Tables 9, 10, and 11. Of the students surveyed by present grade level who had mothers with eleventh grade education or less, 77.9% ranked better selection of jobs with a college degree as their first reason for having college aspirations.

<table>
<thead>
<tr>
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<th>8th</th>
<th>9th</th>
<th>10th</th>
<th>11th</th>
<th>12th</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>1.0</td>
<td>16.4</td>
<td>12.7</td>
<td>18.2</td>
<td>20.0</td>
<td>16.4</td>
<td>16.4</td>
<td>77.9</td>
</tr>
<tr>
<td>Second Choice</td>
<td>1.0</td>
<td>21.1</td>
<td>15.8</td>
<td>21.1</td>
<td>10.5</td>
<td>10.5</td>
<td>21.1</td>
<td>22.1</td>
</tr>
</tbody>
</table>

| Total          | 22% | 22% | 10% | 14% | 26%  | 19%  | 22%  | 115%  |

<table>
<thead>
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<th>Pearson Value</th>
<th>DF</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
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</table>
There were significant differences between students' observed and expected scores, by present grade level and by mother's education level. Additionally, 22.1% of respondents ranked it their second choice.

Ninth (10-18.2%) graders ranked it their first choice somewhat less frequently than expected compared with other grade levels, which ranked it somewhat less frequently to somewhat higher than expected.

The tenth and eleventh graders (2 and 2, respectively) ranked it their second choice a little bit less frequently (12.7% - eighth and 18.2% - ninth). Other grade level groups

### Table 10. Mothers' educational level/eleventh grade or less

<table>
<thead>
<tr>
<th>Rankings</th>
<th>6th</th>
<th>7th</th>
<th>9th</th>
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<th>12th</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Choice</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7.7%</td>
</tr>
<tr>
<td>Second Choice</td>
<td>1</td>
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<td>1</td>
<td></td>
<td></td>
<td>7.7%</td>
</tr>
<tr>
<td>Third Choice</td>
<td>2</td>
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<td>2</td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Fourth Choice</td>
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<td>20</td>
<td>20</td>
<td>3</td>
<td>5</td>
<td>38.5%</td>
</tr>
<tr>
<td>Fifth Choice</td>
<td></td>
<td></td>
<td>20</td>
<td></td>
<td></td>
<td>7.7%</td>
</tr>
<tr>
<td>Column Total</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
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<th>.05 Confidence Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Value</td>
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<tr>
<td>Chi-Square</td>
</tr>
<tr>
<td>Significance</td>
</tr>
</tbody>
</table>
Table 11. Mothers’ educational level/eleventh grade or less

<table>
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<tr>
<th>Rankings</th>
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<th>8th</th>
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<th>12th</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.1%</td>
</tr>
<tr>
<td>Second Choice</td>
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<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>3.2%</td>
</tr>
<tr>
<td>Third Choice</td>
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<td>4</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Fourth Choice</td>
<td></td>
<td>8.7</td>
<td>28.6</td>
<td>7.1</td>
<td>21.4</td>
<td>7.1</td>
<td>21.4</td>
<td>14.7%</td>
</tr>
<tr>
<td>Fifth Choice</td>
<td></td>
<td>7</td>
<td>4</td>
<td>15</td>
<td>9</td>
<td>7</td>
<td>9</td>
<td>46%</td>
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<tr>
<td>Column Total</td>
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<td>10</td>
<td>19</td>
<td>16</td>
<td>16</td>
<td>20</td>
<td>95</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

.05 Confidence Level
Pearson Value 54.41587 DF 24 Significance .00038

ranked it their second choice somewhat less frequently than expected.

Of students surveyed by present grade level who had mothers with eleventh grade educations or less, 38.5% ranked obtaining knowledge of a specific technical field their third and fourth most important reason for college aspirations. There were significant differences between students' observed and expected scores, by present grade level and by mothers' educational level.

Nearly 48.4% percent of students, by present grade level, who had mothers with an eleventh grade education or less
ranked becoming culturally motivated their fourth most important reason for having college aspirations. There were significant differences between students' observed and expected scores, by present grade level and by mothers' education level.

Seventh (4) and eighth (2) graders ranked the reason their fourth choice a little bit less frequently than expected (8.7% and 4.3%, respectively), as compared with students from other grades.

The statistical analysis for research question 10 elicits no significant differences in terms of college aspirations between students' observed and expected scores by ethnic background and by parents' (father and mother) educational levels. Because no significant differences exist by ethnic background and by parents' educational levels, no table diagram will be used to describe data. The questions (5) without data support (no significant differences between students' observed and expected scores, by ethnic background and by parents' educational levels) are as follows:

RQ10 (1) In terms of ethnic background and parental education levels, to fulfill parental expectations (differences not significant).

RQ10 (2) In terms of ethnic background and parental education levels, to have a better selection of jobs (differences not significant).
RQ10 (3) In terms of ethnic background and parental education levels, to obtain greater knowledge of a specific technical field that will improve my chances of getting a job that interests me (differences not significant).

RQ10 (4) In terms of ethnic background and parental education levels, to become culturally motivated about societal values and ideals (differences not significant).

RQ10 (5) In terms of ethnic background and parental education levels, to make more money than my parents and other family members do (differences not significant).

The statistical analysis for research question 11 identifies no significant differences in terms of college aspirations between students' observed and expected scores, by gender and by parental (father and mother) education levels. Because there were no differences, by gender and parents' educational levels, no table diagram is used to describe data. The questions (5) without data support (no significant differences between students' observed and expected scores, by gender and by parental education levels) are as follows:

RQ11 (1) In terms of gender and parental education levels, to fulfill parental expectations (differences not significant).
RQ11 (2) In terms of gender and parental education levels, to have a better selection of jobs (differences not significant).

RQ11 (3) In terms of gender and parental education levels, to obtain greater knowledge of a specific technical field that will improve my chances of getting a job that interests me (differences not significant).

RQ11 (4) In terms of gender and parental education levels, to become culturally motivated about societal values and ideals (differences not significant).

RQ11 (5) In terms of gender and parental education levels, to make more money than my parents and other family members do (differences not significant).

The statistical analysis for research question 13 describes no significant differences in terms of methods of college financing between students' observed and expected scores, by ethnic background. Because no significant differences by ethnic background, were elicited regarding method of college financing, no table diagram is used to describe data. The questions (7) without data support are as follows:

RQ13 (1) In terms of ethnic background, parents' or family's savings will help pay for college expenses (differences not significant).
RQ13 (2) In terms of ethnic background, the student's personal savings will help pay for college expenses (differences not significant).

RQ13 (3) In terms of ethnic background, financial gifts from relatives will help pay for college expenses (differences not significant).

RQ13 (4) In terms of ethnic background, student loans will help pay for college expenses (differences not significant).

RQ13 (5) In terms of ethnic background, scholarships and grants will help pay for college expenses (differences not significant).

RQ13 (6) In terms of ethnic background, earnings from part-time employment while the student attends college will help pay for college expenses (differences not significant).

RQ13 (7) In terms of ethnic background, earnings from full-time employment while the student attends college will help pay for college expenses (differences not significant).

The statistical analysis for research question 14 in Tables 12 and 13 identifies some significant differences in terms of two college financial concerns, between students' observed and expected scores. Of seven questions regarding college financing, two elicit significant differences, by grade level. The questions (5) without data support (no
Table 12. Students’ observed and expected scores, by present grade level

| College financing/student loans to pay college expenses, e.g., observed scores/expected scores | Row Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ratings | 6th | 7th | 8th | 9th | 10th | 11th | 12th | Total |
| Strongly | 3 | 26 | 20 | 32 | 29 | 37 | 31 | 178 |
| Agree | 4.9 | 26.2 | 22.1 | 27.9 | 29.5 | 32.0 | 35.3 | 82.0% |
| Some-what | 2 | 3 | 2 | 6 | 3 | 1 | 4 | 2 | 5 | 23 |
| Agree | .6 | 3.4 | 2.9 | 3.6 | 3.8 | 4.1 | 4.6 | 11.9% |
| Agree | .2 | 2 | 3 | 1 | 3 | 0 | 7 | 16 |
| Column | 5 | 32 | 23 | 34 | 36 | 39 | 43 | 217 |
| Total | 2.8% | 14.7% | 12.4% | 15.7% | 16.6% | 18.0% | 19.8% | 100.0% |

.05 Confidence Level

<table>
<thead>
<tr>
<th>Pearson Value</th>
<th>DF</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>66.78455</td>
<td>12</td>
</tr>
</tbody>
</table>

Table 13. Students’ observed and expected scores, by present grade level

| College financing/earnings from part-time employment, e.g., observed scores/expected scores | Row Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Ratings | 6th | 7th | 8th | 9th | 10th | 11th | 12th | Total |
| Strongly | 3 | 26 | 21 | 26 | 30 | 37 | 29 | 172 |
| Agree | 4.8 | 25.4 | 21.4 | 26.9 | 28.5 | 30.9 | 34.1 | 79.3% |
| Some-what | 2 | 3 | 4 | 5 | 2 | 1 | 8 | 25 |
| Agree | .7 | 3.7 | 3.1 | 3.9 | 4.1 | 4.5 | 5.0 | 11.5% |
| Column | 6 | 32 | 27 | 34 | 36 | 39 | 43 | 217 |
| Total | 2.8% | 14.7% | 12.4% | 15.7% | 16.6% | 18.0% | 19.8% | 100.0% |

.05 Confidence Level

<table>
<thead>
<tr>
<th>Pearson Value</th>
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<th>Significance</th>
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</thead>
<tbody>
<tr>
<td>Chi-Square</td>
<td>74.74812</td>
<td>6</td>
</tr>
</tbody>
</table>
significant differences between students’ observed and
expected scores, by present grade level) are as follows:
RQ14 (1) In terms of grade level, parents’ or family’s
savings will help pay for college expenses
(differences not significant).
RQ14 (2) In terms of grade level, the student’s personal
savings will help pay for college expenses
(differences not significant).
RQ14 (3) In terms of grade level, financial gifts from
relatives will help pay for college expenses
(differences not significant).
RQ14 (4) In terms of grade level, scholarships and grants
will help pay for college expenses (differences not
significant).
RQ14 (5) In terms of grade level, earnings from full-time
employment while the student attends college will
help pay for college expenses (differences not
significant).

The two question (6 and 7) with data support are
presented in Tables 12 and 13. Of the students surveyed by
present grade level, 82.0% strongly agree that student loans
are a means of financing their college expenses. There were
significant differences between students’ observed and
expected scores, by present grade level.

The ninth (32) and eleventh (37) graders who strongly
agreed with the statement rated it higher than expected
(27.9%-ninth and 32.0%-eleventh). Other grade level groups who strongly agreed rated loans moderately lower than expected.

The ninth (1) and the eleventh (2) graders who agreed somewhat rated loans lower than expected (3.6%-ninth and 4.1%-eleventh). Other present grade level groups who agreed somewhat rated it higher than expected. Sixth and eleventh graders who agreed rated loans lower than expected (.2%-sixth and 1.4%-eleventh). Other present grade level groups who agreed rated loans higher than expected.

Of students surveyed by present grade level, 79.3% agreed strongly that earnings from part-time employment would help them finance college. There were significant differences between students’ observed and expected scores, by present grade level.

The sixth (3) and the twelfth (29) graders who agreed strongly rated part-time employment less important than expected (4.8%-sixth) and (34.1%-twelfth). Other grade level groups who agreed strongly with the statement rated it moderately low to high. For example, seventh, eighth, and ninth graders’ observed scores were quite close to those expected.

The tenth (2) and the eleventh (1) graders who agreed somewhat rated part-time employment lower than expected (4.1%-tenth and 4.5-eleventh). Other present grade level groups who agreed somewhat rated it low to moderately higher than
expected. Other present grade level groups who agreed rated it higher than expected.

**One-way analysis**

One-way analysis of variance was used to test for significant mean differences among research questions 1, 2, 3, 4, 6, 8, 13, and 14. Research questions examining student mean scores pooled by present grade level and by ethnic background separately are as follows:

RQ1  How do students differ, by grade level, in terms of their perceptions of what type of college community to attend upon high school graduation?

RQ2  How do students differ, by grade level, in terms of their perceptions of enrichment/academic programs and activities offered by College Bound/Images to inspire ethnic minorities to attend college?

RQ3  How do students differ, by ethnic background, in terms of their perceptions of enrichment/academic programs and activities offered by College Bound/Images to encourage ethnic minorities to attend college?

RQ4  How do students differ, by ethnic background, in terms of their perceptions of what type of college community to enter upon high school graduation?

RQ6  How do students differ, by grade level, in terms of their perceptions of the importance of educational aspirations to the seeking of college admission?
RQ8 How do students differ, by ethnic background, in terms of their perceptions of the importance of educational aspirations to the seeking of college admission?

RQ13 To what extent do students differ, by ethnic background, in terms of their perceptions or college financing?

RQ14 To what extent do students differ, by grade level, in terms of their perceptions of college financing?

The statistical analysis for research question 1 in Table 14 identifies significant mean differences in terms of one college choice among student mean scores pooled by present grade level. Of the four questions ranked by present grade level, the one question presented in Table 14 elicited significant mean differences among student mean scores pooled by grade level. The questions (3) without data support (no significant mean differences among students’ mean scores present grade level) are as follows:

RQ1 (1) In terms of present grade level, community college (differences not significant).

RQ1 (2) In terms of present grade levels, university or four year college (differences not significant).

RQ1 (3) In terms of present grade level, technical or vocational college (differences not significant).

One question with data support is presented in Table 14. Between present grade levels (6th through 12th), there were significant mean differences regarding one college choice—that of business college as a postsecondary institution.
<table>
<thead>
<tr>
<th>Present Grade Level</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>D.F.</th>
<th>F</th>
<th>F Significance</th>
</tr>
</thead>
<tbody>
<tr>
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<td>6</td>
<td>3.6667</td>
<td>.5164</td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>7th</td>
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<td>.4568</td>
<td>6</td>
<td>2.6674</td>
<td>.0163</td>
</tr>
<tr>
<td>8th</td>
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<td>.5092</td>
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</tr>
<tr>
<td>9th</td>
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</tr>
<tr>
<td>10th</td>
<td>36</td>
<td>3.5556</td>
<td>.5578</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>39</td>
<td>3.5897</td>
<td>.4983</td>
<td></td>
<td></td>
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<tr>
<td>12th</td>
<td>43</td>
<td>3.6279</td>
<td>.4891</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>3.4885</td>
<td>.5537</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 Confidence Level

Surprisingly, average mean scores when clustered for seventh (3.2813) and ninth (3.2647) graders compared with those of sixth (3.6667), eighth (3.5185), tenth (3.5556), eleventh (3.5897), and twelfth (3.6279) graders were significantly different.

The statistical analysis for research question 2 indicates no significant mean differences in terms of College Bound/Images concerns among student mean scores pooled by grade level. Because there were no significant mean differences in terms of the variation of students' mean scores pooled by grade level, no table diagram is used to describe data. The questions (9) without data support (no significant
mean differences among student mean scores pooled by grade levels) are as follows:

RQ2 (1) In terms of grade level, College Bound/Images Programs should be offered to increase the pool of ethnic minority students eligible for college admission (differences not significant).

RQ2 (2) In terms of grade level, College Bound/Images Programs provide students with the opportunity to interact and to meet other students with a desire to attend college (differences not significant).

RQ2 (3) In terms of grade level, College Bound/Images Programs give students the opportunity to visit college campuses and to interact with the college community (differences not significant).

RQ2 (4) In terms of grade level, College Bound/Images Programs encourage ethnic minority students to attend college (differences not significant).

RQ2 (5) In terms of grade level, College Bound/Images Programs strengthen students' self-esteem (differences not significant).

RQ2 (6) In terms of grade level, College Bound/Images Programs provide students with enrichment activities related to mathematics (differences not significant).
In terms of grade level, College Bound/Images Programs provide students with enrichment activities related to science (differences not significant).

In terms of grade level, College Bound/Images Programs provide students with enrichment activities related to language, arts, English, and writing (differences not significant).

In terms of grade level, College Bound/Images Programs provide students with enrichment activities related to cultural events, e.g., concert, plays, and operas (differences not significant).

The statistical analysis for research question 3 in Table 15 describes significant mean differences in terms of one College Bound/Images concern among student mean scores pooled by ethnic background. Of the nine questions ranked by ethnic background, the questions presented in Table 15 that elicit significant mean differences among student mean scores pooled by ethnic background are as follows:

RQ3 (1) In terms of ethnic background, College Bound/Images Programs should be offered to increase the pool of ethnic minority students eligible for college admission (differences not significant).

RQ3 (2) In terms of ethnic background, College Bound/Images Programs give students the opportunity to visit college campuses and to interact with the college community (differences not significant).
RQ3 (3) In terms of ethnic background, College Bound/Images Programs encourage ethnic minority students to attend college (differences not significant).

RQ3 (4) In terms of ethnic background, College Bound/Images Programs strengthen students' self-esteem (differences not significant).

RQ3 (5) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to mathematics (differences not significant).

RQ3 (6) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to science (differences not significant).

RQ3 (7) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to language arts, English, and writing (differences not significant).

RQ3 (8) In terms of ethnic background, College Bound/Images Programs provide students with enrichment activities related to cultural events, e.g., concerts, plays, and operas (differences not significant).

The question (9) with data support are presented in Table 15. By ethnic background, there were significant mean differences in terms of one College Bound/Images concern, namely, whether College Bound/Images Programs provide students
Table 15. Students' mean scores pooled by ethnic background

<table>
<thead>
<tr>
<th>Ethnic Background</th>
<th>Count</th>
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<th>Standard Deviation</th>
<th>D.F.</th>
<th>F Ratio</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>African-American</td>
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<td>.3922</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native-American</td>
<td>45</td>
<td>1.2000</td>
<td>.5477</td>
<td>5</td>
<td>2.4173</td>
<td>.0371</td>
</tr>
<tr>
<td>Asian-American</td>
<td>9</td>
<td>1.1111</td>
<td>.3333</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>13</td>
<td>1.0000</td>
<td>.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Latino</td>
<td>5</td>
<td>1.8000</td>
<td>1.3038</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicano</td>
<td>1</td>
<td>1.0000</td>
<td>.0000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>1.1751</td>
<td>.4582</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 Confidence Level

with the opportunity to interact with and to meet other students with the desire to attend college.

Surprisingly, average mean scores when clustered for African-Americans (1.1667), Native-Americans (1.2000), Asian-Americans (1.1111), Hispanics (1.0000), and Chicanos (1.0000) compared with those Latinos (1.8000) are significantly different.

The statistical analysis for research question 4 indicates no significant mean differences in terms of college choices among student mean scores pooled by ethnic background. Because no significant mean differences exist among the variations of student mean scores pooled by ethnic background, a table diagram will not be used to describe data.
Question (4) without data support (no significant mean differences among students' mean scores pooled ethnic background) follows.

RQ4 (1) In terms of ethnic background, community college (differences not significant).

RQ4 (2) In terms of ethnic background, university or four-year college (differences not significant).

RQ4 (3) In terms of ethnic background, business college (differences not significant).

RQ4 (4) In terms of ethnic background, technical or vocational college (differences not significant).

The statistical analysis for research question 6 in Table 16 elicits mean differences in terms of one college aspiration among students' mean scores pooled by grade level. Of the five questions ranked by students according to grade level, the one question presented in Table 16 elicits significant mean differences among students' mean scores pooled by present grade level. The questions (4) without data support (no significant differences among student mean scores pooled by grade level) are as follows:

RQ6 (1) In terms of present grade level, to have a better selection of jobs with a college degree (differences not significant).

RQ6 (2) In terms of present grade level, to obtain greater knowledge of a specific technical field that will
help chances of getting a job of interests (differences not significant).

RQ6 (3) In terms of present grade level, to become culturally motivated about societal values and ideals (differences not significant).

RQ6 (4) In terms of present grade level, to make more money than parents and other family members do (differences not significant).

The one question (5) with data support is presented in Table 16. Among present grade levels, there were significant mean differences in terms of one college aspiration, namely that of fulfilling parental expectations. Surprisingly, average mean scores when clustered together for ninth

Table 16. Students' mean scores pooled together by present grade level

<table>
<thead>
<tr>
<th>Present Grade Level</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>D.F.</th>
<th>F Ratio</th>
<th>F Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>6</td>
<td>3.0000</td>
<td>1.4142</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7th</td>
<td>32</td>
<td>2.0313</td>
<td>.8224</td>
<td>6</td>
<td>2.5522</td>
<td>.0209</td>
</tr>
<tr>
<td>8th</td>
<td>27</td>
<td>2.5556</td>
<td>1.2195</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td>34</td>
<td>1.9412</td>
<td>.8143</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>36</td>
<td>2.2222</td>
<td>1.1492</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>39</td>
<td>2.1026</td>
<td>.8824</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>43</td>
<td>2.6047</td>
<td>1.2371</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>2.2673</td>
<td>1.0726</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 Confidence Level
(1.9412), seventh (2.0313), eleventh (2.1026), and tenth
(2.2222) graders compared with those of eighth (2.5556),
twelfth (2.6047), and sixth (3.0000) graders were
significantly different.

The statistical analysis for research question 8
identifies no significant mean differences in terms of college
aspirations among student mean scores, by ethnic background.
Because no significant mean differences existed between the
variation of student mean scores, by ethnic background, no
table diagram is used. The questions (5) without data support
(no significant mean differences among students’ mean scores,
by ethnic background) are as follows:

RQ8 (1) In terms of ethnic background, to fulfill parental
expectations (differences not significant).

RQ8 (2) In terms of ethnic background, to have a better
selection of jobs with a college degree (differences
not significant).

RQ8 (3) In terms of ethnic background, to obtain greater
knowledge of a specific technical field that will
improve the chances of getting a job of interest me
(differences not significant).

RQ8 (4) In terms of ethnic background, to become culturally
motivated about societal values and ideals
(differences not significant).
RQ8  (5) In terms of ethnic background, to make more money than parents and other family members do (differences not significant).

The statistical analysis for research question 13 identifies no significant mean differences in terms of college financing among student mean scores, by ethnic background. Because significant mean differences were found among the variations of student mean scores pooled ethnic background, no table diagram is used to describe data. The questions (7) without data support are as follows:

RQ13 (1) In terms of ethnic background, parents' or family's savings will help pay for college expenses (differences not significant).

RQ13 (2) In terms of ethnic background, the students' personal savings will help pay for college expenses (differences not significant).

RQ13 (3) In terms of ethnic background, financial gifts from relatives will help pay for college expenses (differences not significant).

RQ13 (4) In terms of ethnic background, student loans will help for college expenses (differences not significant).

RQ13 (5) In terms of ethnic background, scholarships and grants will help pay for college expenses (differences not significant).
RQ13 (6) In terms of ethnic background, earnings from part-time employment while the student attends college will help pay for college expenses (differences not significant).

RQ13 (7) In terms of ethnic background, earnings from full-time employment while the student attends college will help pay for college expenses (differences not significant).

The statistical analysis for research question 14 in Table 17 identifies significant mean differences in terms of one college financial concern among student mean scores pooled by present grade level. Of the seven questions rated by students, the question presented in Table 17 elicited significant mean differences among student mean scores, by present grade level. The questions (6) without data support (no significant mean differences among student mean scores, by present grade level) are as follows:

RQ14 (1) In terms of grade level, parental or family savings will help pay for college expenses (differences not significant).

RQ14 (2) In terms of grade level, the students' personal savings will help pay for college expenses (differences not significant).

RQ14 (3) In terms of grade level, financial gifts from relatives will help pay for college expenses (differences not significant).
RQ14 (4) In terms of grade level, scholarships and grants will help pay for college expenses (differences not significant).

RQ14 (5) In terms of grade level, earnings from part-time employment while the student attends college will help pay for college expenses (differences not significant).

RQ14 (6) In terms of grade level, earnings from full-time employment while the student attends college will help pay for college expenses (differences not significant).

The one question (7) with data support appears in Table 17. Among grade levels (6th through 12th), there were

Table 17. Students' mean scores pooled, by present grade level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Count</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>D.F.</th>
<th>F Ratio</th>
<th>F Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th</td>
<td>6</td>
<td>2.3333</td>
<td>2.3381</td>
<td>6</td>
<td>3.1465</td>
<td>.0056</td>
</tr>
<tr>
<td>7th</td>
<td>32</td>
<td>1.2813</td>
<td>.6832</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8th</td>
<td>27</td>
<td>1.4444</td>
<td>.9740</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td>34</td>
<td>1.0882</td>
<td>.3788</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>36</td>
<td>1.3611</td>
<td>.9607</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>39</td>
<td>1.0513</td>
<td>.2235</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>43</td>
<td>1.5349</td>
<td>1.0083</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>1.3226</td>
<td>.8645</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

.05 Confidence Level
significant mean differences for one college financial concern, i.e., that of paying for college expenses by means of loans. Clustered, average mean scores for 11th (1.0513), 9th (1.0882), 7th (1.2813), 10th (1.3611), 8th (1.4444), and 12th (1.5349) graders compared with the average mean score of 6th (2.3333) graders were significantly different.

Two-way analysis

A two-way analysis of variance was used to test the mean differences among research questions 15, 16, and 17, with scores pooled together by present grade level, ethnic background, and gender, in relation to the length of time spent in College Bound/Images.

RQ15 How does length of time in College Bound/Images affect, by grade level, student perceptions regarding the program's ability to increase the number of ethnic minority students eligible for college admission?

RQ16 How does length of time in College Bound/Images affect, by ethnic background, student perceptions regarding the programs' ability to increase the number of ethnic minority students eligible for college admission?

RQ17 How does length of time in College Bound/Images affect, by gender, student perceptions regarding the program's ability to increase the number of ethnic minority students eligible for college admission?
The statistical analysis for research question 15 in Table 18 describes significant mean differences among students surveyed in terms of their opinions regarding College Bound/Images' ability to increase the pool of ethnic minority students eligible for college admission, by present grade level and by length of time spent in the program. Table 18 illustrates significant mean differences among student mean scores pooled through a two-way interaction in the grade level and the length of time spent in program.

The two-way interaction of grade level and length of time spent in College Bound/Images (.000) demonstrates significant mean differences among students surveyed in terms of their perception of the program's ability to increase the pool of surveyed in terms of College Bound/Images' ability to increase the pool of ethnic minority students eligible for college admission

<table>
<thead>
<tr>
<th>Mean comparison</th>
<th>Sum of Squares</th>
<th>D.F.</th>
<th>Mean Square</th>
<th>F</th>
<th>F Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effect</td>
<td>3.132</td>
<td>9</td>
<td>.348</td>
<td>3.086</td>
<td>.002</td>
</tr>
<tr>
<td>Present Grade Level</td>
<td>2.627</td>
<td>6</td>
<td>.438</td>
<td>3.883</td>
<td>.001</td>
</tr>
<tr>
<td>Length of Time</td>
<td>1.668</td>
<td>3</td>
<td>.556</td>
<td>4.930</td>
<td>.003</td>
</tr>
<tr>
<td>Two-way Interaction</td>
<td>33.877</td>
<td>13</td>
<td>2.606</td>
<td>23.110</td>
<td>.000</td>
</tr>
</tbody>
</table>

.05 Confidence Level
admission. Because no significant mean differences exist according to a two-way interaction with present grade level and length of time spent in College Bound/Images, no table diagrams will be used to describe data. The research questions (16 and 17) without data support are as follows:

RQ16 How does length of time in College Bound/Images affect, by ethnic background, student perceptions regarding the program’s ability to increase the number of ethnic minority students eligible for college admission (differences not significant)?

RQ17 How does length of time in College Bound/Images affect, by gender, student perceptions regarding the program’s ability to increase the number of ethnic minority students eligible for college admission (differences not significant)?

Open-closed discussion questions

There were no statistical tests used for this section of the research project. Student responses were recorded in categories. The categories consisted of academic, nonacademic, and other concerns. The open/closed discussion questions and the categories with their concerns as listed are as follows:
Academic concerns
A. "Helped enhance science related skill". . . . (36 responses)
B. "Helped enhance mathematics related skills". . . . (31 responses)
C. "Helped enhance English related skills". . . . (14 responses)

Nonacademic concerns
D. "The opportunity to travel". . . . (21 responses)
E. "To learn more about college life". . . . (19 responses)
F. "Increased interest in college life". . . . (18 responses)
G. "The opportunity to meet college students". . . . (17 responses)
H. "The opportunity to meet other people". . . . (13 responses)
I. "Not be afraid of college". . . . (8 responses)
J. "To enjoy my school". . . . (7 responses)
K. "Not be afraid to speak out in class". . . . (7 responses)
L. "To feel good about myself". . . . (3 responses)
M. "Opportunity to visit other communities in Iowa". . . . (3 responses)
N. "To learn more about other ethnic groups". . . . (2 responses)
O. "Opportunity to meet some cute boys". . . . (1 response)
Other concerns

P. "No response"... (10)
Q. "No comment"... (9 responses)

Each student response to the open/closed discussion question (describe how the College Bound/Images Program has helped you as a student) was placed in one of three categories. The academic category had a total of 81 responses from students. The nonacademic category had a total of 119 responses from students. The category listed as other had 19 responses from students. Concerns for each category are ranked from the greatest to the smaller number of responses. There was a grand total of 207 responses with 10 nonresponses from students who either forgot or chose not to write a response.

Students also were asked to describe or discuss other concerns they may have had about the College Bound/Images Program. Responses were as follows.

Academic concerns

A. "No summer programs" (20 responses)
B. "Not enough science-related activities"... (16 responses)
C. "Not enough programs and activities for some schools compared with others" (16 responses)
D. "No programs related to teacher education" (9 responses)
E. "No programs related to music education"... (4 responses)

Nonacademic concerns
F. "Not enough money spent on vouchers" (20 responses)
G. "Not enough parental participation" (19 responses)
H. "Lack of communication regarding when or where activities are held for College Bound/Images"... (19 responses)
I. "Lack of minority role models" (18 responses)
J. "The lack of female role models" (23 responses)
K. "Too much time spent helping male students compared with female students" (10 responses)
L. "No overnight visits on college campuses"... (9 responses)
M. "Little Asian-American student participation"... (4 responses)
N. "No follow-up calls when help is needed"... (1 response)
O. "Not being able to use vouchers to finance college expenses outside the State of Iowa" (1 response)

Other concerns
P. "No response"... (28)

Each student response for the open/closed discussion question was placed in one of three categories. The academic
category had a total of 65 responses from students. The nonacademic category had a total of 124 responses from students. The category listed as others had 28 responses. Concerns for each category are ranked from greatest to smallest numbers of responses. There was a grand total of 187 responses with 28 no responses from students who either forgot or chose not to write a response.
The major purpose of this study was to examine how students perceive the College Bound/Images Program as a precollege program to increase the pools of ethnic minorities seeking college admission at Iowa's Regents institutions. This section summarizes the statistical analyses reported in the previous chapter and concludes the study. Recommendations are made to College Bound/Images administrators in the hope of enhancing precollege programs and activities so that efforts may continue to inspire ethnic minorities to seek college admission.

Summary

As ethnic minority enrollment in higher education continues to decline, college communities and public school districts across the United States have developed precollege programs and activities to increase college participation among ethnic minorities with academic deficiencies. The precollege program targeting ethnic minorities with academic deficiencies to seek college admission at Iowa's Regents institutions is the primary focus of this study.

Since the beginning of College Bound/Images in fall 1989, goals and objectives set forth by the Regents institutions on behalf of the Board of Regents are to encourage ethnic minority students with academic deficiencies to seek college
admission after completing high school. Although the Regents institutions during the past three years have been working towards this end, they have yet to evaluate the success of their programs through the perception of students currently enrolled. The goals and objectives in Chapter I were evaluated by students at Regents institutions, in five general areas: College Bound/Images concerns; financial concerns; college aspirations; college choices; and open and closed discussion questions.

Regarding the statement that College Bound/Images Programs provide students with the opportunity to interact with and to meet other students with the desire to attend college, female students' mean score was higher than male students'. Moreover, the group mean score for female students was higher than the group mean score for male students regarding the statement that College Bound/Images Programs provide students with enrichment activities related to cultural events, e.g., concerts, plays, and operas.

Of the six ethnic groups surveyed, 85% strongly agreed with the idea that College Bound/Images Programs provide students with the opportunity to interact with and to meet other students with the desire to attend college. The observed score was higher than the expected mean score for Native-American students, who strongly agreed. The observed scores were lower than the expected mean scores for African-
American, Asian-American, Hispanic, Latino, and Chicano students, who also strongly agreed.

Regarding whether College Bound/Images Programs encourage ethnic minority students to attend college in the future, variations in mean score were small among African-American, Native-American, Asian-American, Hispanics, and Chicano students compared with the mean score for Latino students.

Regarding the statement that College Bound/Images Programs should be offered to increase the pools of ethnic minority students eligible for college admission, the f value was significantly greater for grade level than for length of time spent in College Bound/Images.

Level of response to the statement that student loans will help pay for college expenses were higher for observed than for expected mean scores for ninth and eleventh grade students, who strongly agreed. Observed mean scores were moderately lower than expected for sixth, seventh, eighth, tenth, and twelfth grade students, who strongly agreed. Of the seven grades surveyed, 82% strongly agreed with this statement.

The observed scores for the statement that earnings from part-time employment while attending college will help pay for college expenses were higher than the expected mean scores for seventh, tenth, and eleventh grade students, who strongly agreed. The observed scores were moderately lower than the expected mean scores for sixth, eighth, ninth, and twelfth
grade students, who strongly agreed. Of the seven grades surveyed, 79.3% strongly agreed with this statement.

In terms of the statement that student loans will help pay for college expenses, variation in mean scores was small among seventh, eighth, ninth, tenth, eleventh, and twelfth grade students compared with the mean score for sixth grade students.

Regarding the statement that attending college was important to improve job selection, observed scores were higher than expected mean scores for sixth, seventh, tenth, and eleventh grade students, who rated the statement their first reason. Observed scores were lower than expected mean scores for eighth, ninth, and twelfth grade students, who rated it their first reason. Of the seven grades surveyed, 59.0% rated this their first reason.

Regarding fulfillment of parental expectations, the variation between mean scores was small among seventh, ninth, tenth, and eleventh grade students compared with eighth and twelfth grade students. The sixth grade students' mean scores were quite different from other levels. Of the four grades surveyed, 65% had fathers with college degrees.

Moreover, regarding the motivation to have an improved selection of jobs with a college degree, the observed scores were lower than the expected score for sixth, seventh, tenth, eleventh, and twelfth grade students. Observed scores were lower than expected mean scores for eighth and ninth grade
students. Sixth, seventh, tenth, eleventh, and twelfth, grade students ranked it their first reason. Of the six grade levels surveyed, nearly 58% of respondents had mothers with eleventh grade education or less.

The statement that a college education was important so that respondents could gain knowledge of a specific technical field and thus improve their chances of getting a job of interest elicited observed scores lower than expected scores for seventh, ninth, eleventh, and twelfth grade students, who rated it their third reason. The sixth grade students ranked it their fifth. Of the five grades surveyed, nearly 39% had mothers with an eleventh grade education or less.

In terms of the college aspiration, to become culturally motivated about societal values and ideas, observed scores were lower than expected scores for seventh, tenth, and twelfth grade students. Sixth and eleventh grade students rated it their fourth reason. Of the five grades surveyed, 45% had fathers with college degrees. Observed scores were lower than expected scores for seventh, eighth, and ninth grade students. Sixth, tenth, eleventh, and twelfth grade students rated it their fifth reason. Of the seven grades surveyed, 48.4% had mothers with an eleventh grade education or less.

Regarding the choice of community college, observed scores were higher than expected scores for sixth, seventh, tenth, and eleventh grade students. Eighth, ninth, and
twelfth grade students ranked it their second choice. Of the seven grades surveyed, nearly 81.0% ranked community college their second choice of a college community to attend after high school.

For the choice of university/four-year college, observed scores were higher than expected scores for African-American and Latino students, who rated it their first choice of a college community to attend after graduating from high school. Native-American, Asian-American, Hispanic, and Chicano students ranked university/four-year college their first choice, and observed scores were slightly below expected scores. Of the six ethnic groups, nearly 84.0% ranked university/four-year college their first choice of a college community to attend upon completing high school.

For choice of business college, variations in mean scores were small between seventh and ninth grade students compared with those between eighth, tenth, and eleventh grade students. The sixth and twelfth grade students’ mean scores were close to those of all other grades.

Conclusion

Implicit in the findings of this research is the conclusion that the College Bound/Images Programs hosted by Iowa’s Regents institutions have encouraged nearly 85% of the ethnic minorities in grades six through twelve to seek college admission upon high school graduation.
Although one cannot assume that all ethnic minority students currently enrolled in College Bound/Images have had their interest in college heightened, since the precollege program's inception in the fall of 1989, but ethnic minority students identified as academically marginal or academically at-risk have had their perceptions about the possibility and the desirability of seeking postsecondary education after high school completion somewhat changed.

It is the purpose of this research project to highlight the need of College Bound/Images to serve as a motivational vehicle to encourage ethnic minority students with learning deficiencies to seek college admission upon finishing high school. To ensure that ethnic minority students are encouraged to seek college admission, the state of Iowa through the leadership of its institutions of higher education must continue to be responsible for motivating, supporting, and advocating. Students, parents, and state representatives must share responsibility for providing a responsive precollege programs that encourage ethnic minority students to seek college admission regardless of learning deficiencies. When this happens, society as a whole will benefit.

Recommendations for College Bound/Images

For the College Bound/Images Programs to continue to succeed at the Regents institutions, certain conditions must and/or should take place: institutional commitment with
support from public school districts, faculty, staff, local and state governments, and communities at large.

Some recommendations for the College Bound/Images Programs to consider follows:

1. Design and implement programs and activities that will heighten female as well as male students’ opportunity to interact with and to meet other students with the desire to attend college in the future.

2. Design and implement cultural events that would heighten female as well as male students’ interests in seeking college admission after completing high school.

3. Encourage female faculty and staff members to serve as role models.

4. Increase the number of programs and activities offered during summer months for students.

5. If possible, increase the amount of money spent on vouchers awarded to students.

6. Encourage parental participation and involvement.

7. Make oral and written communications clear and precise regarding when or where activities are held.

8. Encourage minority faculty and staff members to serve as role models.

9. Increase the number of science-related activities.

10. Articulate additional programs and activities with public school districts for which selection is limited.
11. Make sure that equal quality time is spent assisting female students and male students.

12. Implement adequately supervised overnight visits for students on college campus.

13. Implement teacher-education programs and activities for students interested in pursuing an education career.

14. Implement music education programs and activities for students interested in this field.

15. Encourage participation and involvement among Asian-American students.

16. Make sure that follow-up contacts are made available for students, perhaps in the form of oral or written communications.

17. If possible, consider the wishes of students who want to use vouchers to finance college expenses outside the state of Iowa.

18. Most important, College Bound/Images Directors should encourage program coordinators to be a little bit more sensitive to female student concerns whether they are academic or nonacademic.

The author hopes that these recommendations may be of use to administrators of College Bound/Images Programs and activities. He also hopes that personnel will persist in their efforts to encourage ethnic minority students to seek college admission upon high school graduation. With these recommendations, the author feels that the State of Iowa will
continue in its efforts and commitment to educating ethnic minority students with special academic and nonacademic needs.

The implications and the beneficiaries of the research project are presented in conclusion.

Implications
1. To encourage articulation for academic and nonacademic programs between public school districts and college communities.
2. To promote higher education awareness among ethnic minority students and their parents.
3. To increase early intervention recruitment efforts among postsecondary institutions.
4. To encourage scientific research efforts as a means of evaluating existing precollege program needs, concerns, and success rates.
5. To help with making the transition for College Bound students from secondary institutions to postsecondary institutions smoother.

Beneficiaries
1. Students
2. Parents
3. Public school educators and administrators
4. College/University educators and administrators
5. Society at large
The author feels that if the beneficiaries work collectively to help ethnic minorities with learning disabilities improve their academic performances by implementing intervention programs, e.g., precollege programs, these students will have not only the desire to complete high school, but the desire to attend postsecondary institutions after high school. Havighurst (1979) pointed out several years ago that intervention programs can succeed only when such beneficiaries as mentioned are in support of one another’s goals and objectives to improve the academic performances of ethnic minorities. He stressed that collective rather than independent participation, when combined with expert assistance, was most desirable.


Hauvighurst, R. (1979). *Society and Education.* (pp. 221-244). Boston, MA: Allyn and Bacon, Inc.


I thank God for his strength, guidance, and inspiration in my life and seeing this research project through. I extend thanks and appreciation to my major professor, Dr. Daniel Robinson, who made it possible for me to have a shoulder to lean on when times were difficult. I also extend warm appreciation and gratitude to Dr. Doug Catron, Dr. Charles Kniker, and to Dr. George Kizer for serving on the committee and contributing their knowledge and leadership to the development of the research project. I greatly appreciate Dr. George Jackson for his insight and knowledge regarding College Bound/Images as a precollege program to inspire ethnic minorities to seek college admission after completing high school. I thank Dr. Richard Warren and Dr. Mack Shelley for taking the "sting" out of educational statistical research. I also thank Dr. Lenola Allen-Sommerville for having faith in me that the project under my leadership would meet all required deadlines.

An enormous amount of love and appreciation is due my family for their love, strength, encouragement, and support throughout my tenure as a graduate student in the PhD program for professional studies in education. I could not have completed my degree or this project without their understanding and patience. I thank Christine Patterson, Carol Mahan, Vera Lang, Patricia Elmore, and Clarence Cotton,
Jr., too, for their friendship and encouragement. Thank all of you for having faith in me when I could not see the light at the end of the tunnel. Finally, I thank my landlords, Jon and Mary Lou Morgan, for their moral support and their willingness to serve as my parents away from home. Your friendship during the past four and a half years has made a deep impression on me. I love you both.
APPENDIX A: ENROLLMENT INFORMATION AND LETTER OF APPROVAL
### College Enrollment by Racial and Ethnic Group, Selected Years

#### American Indian

<table>
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<tr>
<td>Women</td>
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#### Asian

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<td>Women</td>
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#### Black

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#### Hispanic

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<td>400,000</td>
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<tr>
<td>Women</td>
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#### Total

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</table>
Proportion of 18-to-24-Year-Olds Enrolled in College, by High-School-Graduation Status and Race

<table>
<thead>
<tr>
<th>Year</th>
<th>White All</th>
<th>White High-school graduates</th>
<th>Black All</th>
<th>Black High-school graduates</th>
<th>Hispanic All</th>
<th>Hispanic High-school graduates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>26.2%</td>
<td>31.8%</td>
<td>19.2%</td>
<td>27.6%</td>
<td>16.1%</td>
<td>29.8%</td>
</tr>
<tr>
<td>1981</td>
<td>26.7</td>
<td>32.5</td>
<td>19.9</td>
<td>28.0</td>
<td>16.7</td>
<td>29.9</td>
</tr>
<tr>
<td>1982</td>
<td>27.2</td>
<td>33.1</td>
<td>19.8</td>
<td>28.0</td>
<td>16.8</td>
<td>29.2</td>
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<tr>
<td>1983</td>
<td>27.0</td>
<td>32.9</td>
<td>19.2</td>
<td>27.0</td>
<td>17.2</td>
<td>31.4</td>
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<tr>
<td>1984</td>
<td>28.0</td>
<td>33.7</td>
<td>20.4</td>
<td>27.2</td>
<td>17.9</td>
<td>29.9</td>
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<tr>
<td>1985</td>
<td>28.7</td>
<td>34.4</td>
<td>19.8</td>
<td>26.1</td>
<td>16.9</td>
<td>26.9</td>
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<tr>
<td>1986</td>
<td>28.6</td>
<td>34.5</td>
<td>22.2</td>
<td>29.1</td>
<td>18.2</td>
<td>30.4</td>
</tr>
<tr>
<td>1987</td>
<td>30.2</td>
<td>36.6</td>
<td>22.8</td>
<td>30.0</td>
<td>17.6</td>
<td>28.5</td>
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<tr>
<td>1988</td>
<td>31.3</td>
<td>38.1</td>
<td>21.1</td>
<td>28.1</td>
<td>17.0</td>
<td>30.9</td>
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<tr>
<td>1989</td>
<td>31.8</td>
<td>38.8</td>
<td>23.5</td>
<td>30.8</td>
<td>16.1</td>
<td>28.7</td>
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<tr>
<td>1990</td>
<td>32.5</td>
<td>39.4</td>
<td>25.4</td>
<td>33.0</td>
<td>15.8</td>
<td>29.0</td>
</tr>
</tbody>
</table>

Note: The figures are based on annual Census Bureau surveys of 60,000 households. The survey defined high-school graduates as those who had completed four years of high school or more. Hispanics may be of any race.

SOURCE: CENSUS BUREAU
The Nation

### 9 Issues Affecting Higher Education: a Roll Call of the States

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Issue</td>
<td>Tax-Exempt Bonds for College Savings. These states have programs to sell tax-exempt bonds to families to help them finance college education.</td>
</tr>
<tr>
<td>2. Issue</td>
<td>Prepaid-Tuition Plans. These states offer plans that allow parents to pay a set sum of money, years in advance, for their children's education.</td>
</tr>
<tr>
<td>3. Issue</td>
<td>Certification of Competence in English Language for Teaching Assistants. These states require public colleges and universities to certify that their teaching assistants are competent in English.</td>
</tr>
<tr>
<td>4. Issue</td>
<td>Restrictions of Texas on Business Activities of Colleges. These states limit or tax the business activities of colleges and universities and/or require them to register as non-profit groups.</td>
</tr>
<tr>
<td>5. Issue</td>
<td>Vandalism of Animal-Research Facilities. These states treat vandalism of animal-research facilities as a specific crime.</td>
</tr>
<tr>
<td>6. Issue</td>
<td>Alternative Certification for School Teachers. These states allow college graduates who have not completed an education major to become public-school teachers without completing a traditional course of study in education.</td>
</tr>
<tr>
<td>7. Issue</td>
<td>Mid-year budget cuts. These states had their 1991-92 state appropriations cut at some time during the fiscal year.</td>
</tr>
<tr>
<td>8. Issue</td>
<td>Non-Education Majors for High-School Teachers. These states require prospective secondary-school teachers to major in a subject other than education.</td>
</tr>
<tr>
<td>9. Issue</td>
<td>A complete list of the states and issues is available in the Supplement.</td>
</tr>
</tbody>
</table>

### Percentage Change in College Enrollment, 1980 to 1990

### Percentage Change in State Appropriations for Higher Education, 1989-90 to 1991-92
Dear Ms. Wiebe:

I would appreciate it very much if you would send a letter granting me permission to use as part of my dissertation a photocopy of a table to be included as part of my appendix section. The table to be used can be found in the Chronicle's Almanac of 1991. The title of table is called, "College Enrollment by Racial and Ethnic Group, Selected Years".

I currently am a graduate student seeking a Doctor of Philosophy Degree in Education with emphasis in Higher Education at Iowa State University, Ames, Iowa 50011. My plan is to graduate August 7th, 1993.

In closing, it is imperative that your letter of permission be sent as soon as possible. You may fax the letter to Instructional Resource Center, Iowa State University, Ames, Iowa 50011. The fax number is as follows, 515-294-2763. I need you letter of permission on or before July, 16, 1993. I apologize for the short notice. If I can be of further assistance to you and your staff, feel free to reach me at the address and/or telephone number as specified above. Your attention regarding this matter would be most appreciated. Thank you.

Sincerely Yours,

Dr. Sandy Hoagland, Jr.
APPENDIX B: INDEPENDENT AND DEPENDENT VARIABLES SELECTED TO GUIDE THE RESEARCH PROJECT, AS REPRESENTED BY THE SEVENTEEN QUESTIONS
<table>
<thead>
<tr>
<th>A. Independent Variables Selected to Manipulate Dependent Variables Are as Follows:</th>
<th>B. Dependent Variables Selected to Be Measured Through the Manipulation of Independent Variables Are as Follows:</th>
<th>C. Independent Variables Used or Selected to Manipulate Dependent Variables Are as Follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Present Grade Level of Students, (1).</td>
<td>1) Community College, (28)</td>
<td>1) Present Grade Level of Students</td>
</tr>
<tr>
<td>2) Gender of Students, (3).</td>
<td>2) University or Four Year College, (29)</td>
<td>2) Ethnic Background of Students</td>
</tr>
<tr>
<td>3) Ethnic Background of Students, (4).</td>
<td>3) Business College, (30)</td>
<td>3) Gender of Students</td>
</tr>
<tr>
<td>5) Education Level of Father or Male Guardian, (32).</td>
<td>5) Should be offered to increase to pool of ethnic minorities, (7)</td>
<td>6) Education Level of Mother or Female Guardian, (33).</td>
</tr>
<tr>
<td>6) Education Level of Mother or Female Guardian, (33).</td>
<td>6) Encourage ethnic minority student to attend college in the future, (10)</td>
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</table>
APPENDIX C: FACTORS TO INFLUENCE COLLEGE ADMISSION
Potential factors perceived by students to influence their college admission.

<table>
<thead>
<tr>
<th>Potential Factors</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parental limited savings bases upon low occupational status to finance students higher education aspirations.</td>
<td>Hearn (1985)</td>
</tr>
<tr>
<td>Parent savings, cost of tuition, and type of college to attend as well.</td>
<td>Olson (1984)</td>
</tr>
<tr>
<td>Wise investment: The type of economic and social climate of students name environment.</td>
<td>Astin (1978)</td>
</tr>
<tr>
<td>Welfare reform: Lack of commitment by the federal and state governments to finance single mothers with dependents higher education aspirations.</td>
<td>Jackson (1992)</td>
</tr>
<tr>
<td>Lack of financial support and availability to equal access to higher education due to slow economic growth rate in the United States.</td>
<td>Blumenstyk (1992)</td>
</tr>
<tr>
<td></td>
<td>Hansen (1982)</td>
</tr>
<tr>
<td></td>
<td>Ballesteros (1986)</td>
</tr>
</tbody>
</table>
Potential factors perceived by ethnic minority students to influence their college admission.

<table>
<thead>
<tr>
<th>Potential Factors</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of basic skills English, math, and science</td>
<td>The California P.E. Commission, 1986</td>
</tr>
<tr>
<td>Impact of high school social and academic climate</td>
<td>Duran (1986)</td>
</tr>
<tr>
<td>Lack of bilingual or bicultural teaching</td>
<td>Arizona Department of Economic Security (1986)</td>
</tr>
<tr>
<td>Lack of programs and activities to promote social integration in the college community</td>
<td>Attinasi (1986)</td>
</tr>
<tr>
<td>Lack of federal Compensatory Funding in hiring tutors to teach ethnic minority students with learning disabilities</td>
<td>Malcom (1985) Menstre (1986)</td>
</tr>
<tr>
<td>Poor writing skills along with limited financial resources to pay for school and take care of family</td>
<td>Munoz (1986)</td>
</tr>
<tr>
<td>Parental income and social implications from home environment</td>
<td>Lee (1985)</td>
</tr>
<tr>
<td>Lack of educational literature to support multicultural diversity</td>
<td>Rodriguez (1991)</td>
</tr>
<tr>
<td>Low self-esteem</td>
<td>Mercer (1991)</td>
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</table>
APPENDIX D: PRECOLLEGE PROGRAMS ARTICULATED
<table>
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<th>Programs and Their Mission</th>
<th>Researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>To encourage ethnic minority students to seek college admission by improving their academic needs and concerns somewhat more adequately.</td>
<td>Fielding (1989)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission by easing their anxiety and frustration before transferring from one educational community to another</td>
<td>Andrews (1988)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission by having them choose career paths during their primary grades</td>
<td>Scott (1985)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission so that they may achieve higher socioeconomic status than their parents</td>
<td>Kintzer (1985)</td>
</tr>
<tr>
<td>To encourage high-risk ethnic minority students with college potential to seek postsecondary education through middle college alternative schools.</td>
<td>Lieberman (1986)</td>
</tr>
<tr>
<td>To encourage high-risk ethnic minority students with college potential to seek postsecondary education through peer leadership from currently enrolled college students</td>
<td>Powell (1987)</td>
</tr>
<tr>
<td>To encourage high-risk ethnic minority students with college potential to seek postsecondary education, but those without college potential to complete high school and seek future employment</td>
<td>Milliken (1986)</td>
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<tr>
<td>Programs and Their Mission</td>
<td>Researchers</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>To Attract and recruit ethnic minority students for college admission through the sharing of various resources, e.g., faculty and facilities</td>
<td>Mabry (1988)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission through first time postsecondary curricular exposure and self-esteem enhancement while enrolled in high school</td>
<td>Rodriguez (1989)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission through the availability of providing precollege programs that stress academic, counseling, tutoring, and financial aid counseling in grades 7 through 12</td>
<td>Keller (1990)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission from mentors who will serve as role models with different ethnic backgrounds</td>
<td>Rambert (1989)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission by improving cognitive skills applicable for reading comprehension on the university level</td>
<td>Duran (1989)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission by providing time management skills applicable to help students balance study habits and peer socialization while in school</td>
<td>Krajewski (1988)</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission through career and financial counseling before entering postsecondary institutions</td>
<td>Ellison</td>
</tr>
<tr>
<td>To encourage ethnic minority students to seek college admission by improving mathematics and science related skills before entering postsecondary institutions</td>
<td>Maeroff (1984)</td>
</tr>
<tr>
<td></td>
<td>Bayles (1983)</td>
</tr>
</tbody>
</table>
| To encourage ethnic minority students to seek college admission by exposing them to as many available resources (e.g. local government officials, landlords, faculty, transportation, etc.) applicable to enhance campus and community bonding | Hixson (1986)  
Guadioni (1984) |
|---|---|
| To encourage ethnic minority students to seek college admission by providing faculty with the opportunity to make additional monies after regular school hours | Fortune (1986)  
Trubowitz (1984) |
| To encourage ethnic minority students to seek college admission through curricular cohesiveness among various educational agencies in trying to adequately address academic needs of students. | Goldberg (1987)  
The College Board (1983)  
Cross (1976) |
APPENDIX E: SURVEY INSTRUMENT (QUESTIONNAIRE) FOR STUDENTS
ENROLLED IN COLLEGE BOUND COURSES
Directions: Please circle the letter that represents the answer of your choice. Mark only one letter for each question, unless instructed otherwise.

**Personal Characteristics**

1. What is your present level in school?
   A. 5th
   B. 6th
   C. 7th
   D. 8th
   E. 9th
   F. 10th
   G. 11th
   H. 12th
   I. Other __________________________ (specify)

2. What type of school do you currently attend?
   A. Public
   B. Private
   C. Home Schooling
   D. Other __________________________ (specify)

3. What is your gender?
   A. Male
   B. Female

4. What is your ethnic background?
   A. African American
   B. Native American
   C. Asian American
   D. Hispanic
   E. Latino
   F. Chicano
   G. Mexican American
   H. Pacific Islander
   I. Puerto Rican
   J. Other

5. Were you born in the United States?
   A. Yes
   B. No

6. How long have you participated in the College Bound Program?
   A. One year
   B. Two years
   C. Three years
   D. Less than one year
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<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Un-decided</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. College Bound/Images Programs should be offered to increase the pool of ethnic minority students who will be eligible for college admission.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<tr>
<td>8. College Bound/Images Programs provide students with the opportunity to interact and meet other students that have the desire to attend college in the future.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9. College Bound/Images Programs give students the opportunity to visit college campuses and interact with the college community.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>College Bound/Images Programs encourage ethnic minority students attend college in the future.</td>
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<tr>
<td></td>
<td>College Bound/Images Programs strengthen students' self-esteem.</td>
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<tr>
<td></td>
<td>College Bound/Images Programs provide students with enrichment activities related to math.</td>
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<tr>
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<tr>
<td></td>
<td>College Bound/Images Programs provide students with enrichment activities related to science.</td>
<td></td>
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<tr>
<td>13</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>College Bound/Images Programs provide students with enrichment activities related to language arts, English and writing.</td>
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<td></td>
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</tr>
<tr>
<td>14</td>
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</tr>
</tbody>
</table>
College Bound/Images Programs provide students with enrichment activities related to cultural events (e.g. concerts, plays, operas, etc.)
### Financial Concerns

The following is a list of concerns about your financial needs. For each of the concern statements, please circle the number that best describes your plans to pay for your college expenses. Circle only one number for each question.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Un-decided</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>16. My parent's or family's savings will help pay for my college expenses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>17. My personal savings will help pay for my college expenses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>18. Financial gifts from relatives will help pay for my college expenses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>19. Student loans will help pay for my college expenses.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Scholarships</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
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</tr>
<tr>
<td>20.</td>
<td>and grants will help pay for my college expenses.</td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Earnings from part-time employment while attending college will help pay for my college expenses.</th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
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<td>21.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Earnings from full-time employment while attending college will help pay for my college expenses.</th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>22.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rank in order the five (5) aspirations that would encourage you to attend college in the future. Using 1 as your first choice, 2 as your second choice, 3 as your third choice, 4 as your fourth choice, and 5 as your fifth choice. Be sure to place a number beside each response.

Part IV

College Aspirations

23. ________ To fulfill my parents' expectations.
24. ________ To have a better selection of jobs with a college degree.
25. ________ To obtain more knowledge about a specific technical training that will help my chances of getting a job that interests me.
26. ________ To become culturally motivated about societal values and ideals.
27. ________ To make more money than my parents as well as other family members.

Rank in order the four (4) types of colleges that you would like to attend after completing high school, using 1 as your first choice, 2 as your second choice, 3 as your third choice, and 4 as your fourth choice. Be sure to place a number beside each response.

Part V

College Choices

28. ____ Community college
29. ____ University or four year college
30. ____ Business college
31. ____ Technical or vocational college

Part VI

Parent's Educational Background

32. Circle the highest level of education completed by your father or male guardian. Circle only one letter.
   A. Advanced degree (Masters or above)
   B. College degree
   C. Some college
   D. High school only
   E. Eleventh grade or less

33. Circle the highest level of education completed by your mother or female guardian. Circle only one letter.
   A. Advance degree (Masters or above)
   B. College degree
   C. Some college
   D. High school only
   E. Eleventh grade or less
Open and Closed Discussion Questions

34. Describe how the College Bound/Images Program has helped you as a student.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

35. Describe or discuss other concerns you may have about the College Bound/Images Program.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

For Parent's Comments Only

Open Comments

Please check one of the statements

_____ Yes. My child may participate in the College Bound/Images Study.

_____ No. My child may not participate in the College Bound/Images Study.
APPENDIX F: DATA ANALYSIS AND STATISTICAL PROCEDURE AND
DEScriptions OF STATISTICAL PROCEDURES
Data analysis and statistical procedures

The statistical procedures used for data analysis in this study included T-tests, crosstabs, one-way, and two analyses of variance.

Description of statistical procedures

1. **T-test** was used to compare mean differences between two groups. Research questions tested by this statistical procedure were 5, 7, and 12. I selected these research questions for the T-test because they represent two separate groups only—gender.

2. **One-way analysis of variance** was used to compare mean differences between two or more groups. Research questions tested by this statistical procedure were 1, 2, 3, 4, 6, 8, 13, and 14. I selected these research questions for one-way analysis of variance because it tested the effects of one independent variable on one dependent variable.

3. **Two-way analysis of variance** was used to test the effects of two independent variables on one dependent variable. Research questions tested by this statistical procedure were 15, 16, and 17. I selected these research questions to be tested by two-way analysis of variance because of two independent variables and one dependent variable for each question.
Crosstabs were used to compare observed scores with expected scores for individual responses using a row-by-column table-crosstabs table. Research questions tested by this statistical procedures were 1, 2, 3, 4, 6, 8, 9, 10, 13, and 14. I selected these research questions for the crosstab testing framework for these variables.
APPENDIX G: COVER LETTERS AND LETTERS OF PARTICIPATION
Sandy Hoagland, Jr.
1805 1/2 Coolidge Drive
Ames, Iowa  50010

Dear Program Director:

I am a doctoral student at Iowa State University pursuing a degree in the Professional Studies (Education) Department, with an emphasis in Higher Education. I am interested in perceptions regarding College Bound/Images Program efforts to expand the pool of minority students currently enrolled in College Bound/Images at your institutions.

For this study to succeed, I need your help in encouraging student participation. I assure you that the individual responses of students will be kept in strictest confidence.

A letter to parents that will explain the nature of this study will accompany the questionnaire mailed to each participant. In addition, I would greatly appreciate having a letter of support from you on or before November 25, 1992. I am requesting such a letter from the director at each regent institution.

I look forward to meeting with you and your staff to discuss in detail the nature of this study. If you have any questions regarding the content of this letter, please call (515) 232-1317 or write 1805 1/2 Coolidge Drive, Ames, Iowa  50010.

Once again, I look forward to hearing of your support and trust that the information collected will be of value to you and to your program. Thank you!

Sincerely,

Mr. Sandy Hoagland, Jr.
Doctoral Student
Higher Education

Dr. Daniel Robinson,
Professor and Section Leader Higher Education
Dear parents,

I am currently a graduate student at Iowa State University pursuing a Doctor of Philosophy degree in Professional Studies with an emphasis in Higher Education. I am concerned with the perceptions of your child, who is currently enrolled in College Bound/Images at the University of Northern Iowa.

This study will be the first of its kind undertaken at Iowa State University. For it to succeed, I need your help as well as your child’s help in completing the survey questionnaire. By completing and returning this questionnaire promptly, you and your child will contribute invaluable knowledge to this project. It will take about ten to fifteen minutes to complete the questionnaire. Please check one of the boxes on the last page of the questionnaire booklet stating whether your child has your permission to participate in the study. Your permission is definitely needed before answers can be provided. Your participation in this study is voluntary.

Do not let your child write his or her name anywhere on the booklet. The code number on the questionnaire booklet, which will be used for mailing purposes, will be removed after the information is collected and analyzed. I assure you that the responses will be kept in strictest confidence.

The results of this questionnaire will help educational leaders with the College Bound/Images Program provide better educational opportunities for ethnic minority students.

After your child has completed the questionnaire, please make sure that each question has been answered. Staple or tape the edges and deposit in the U.S. Mail. No postage or envelope is necessary. Please have the questionnaire completed and returned to us on or before November 25, 1992. If there are any questions, you may call me at (515) 232-1317 or write 1805 1/2 Coolidge Drive, Ames, Iowa 50010. Thank you for your time and cooperation for making this study a success.

Sincerely,

Mr. Sandy Hoagland, Jr.
Doctoral Student, Higher Education

Dr. Daniel Robinson,
Professor and Section Leader Higher Education
To Whom it may concern:

The intent of this letter is to confirm our support of Mr. Sandy Hoagland’s dissertation topic: *College Bound/IMAGES: How Students Perceive a Pre-college Program to Expand the Pool of Ethnic Minorities Seeking College Admission at Iowa’s Regents Institutions*. If you have any questions regarding the topic and/or our role in Mr. Hoagland’s research you may contact me at the above phone number.

Sincerely,

George A. Jackson
November 2, 1992

To whom it may concern:

I am writing on behalf of Mr. Sandy Hoagland who has met with me to discuss his desire to conduct research on the College Bound Program for his dissertation. I believe that this project will provide the Regent Institutions with important information about the nature of their programs and about future directions. Given our commitment to diversity on each of our campuses this project can make an important contribution to that effort. I hope that your committee will rule favorably in order that Mr. Hoagland can begin collecting data.

Please contact me if you have any questions.

Sincerely,

Nancy Rusty Barcelo, Ph.D.
Assistant Dean for
Academic Affairs
Associate Director for
Opportunity at Iowa
October 30, 1992

Mr. Sandy Hoagland, Jr.
1805 1/2 Coolidge Dr.
Ames, IA 50010

Dear Mr. Hoagland:

This letter is to confirm our agreement to participate in the research study: "College Bound/IMAGES: How Students Perceive a Pre-College Program to Expand the Pool of Ethnic Minorities Seeking College Admission at Iowa's Regents Institutions." It is my understanding that each institution will randomly select 150 College Bound participants from the available pool. Upon your completion of the study, we anticipate that the results will be made available to us.

We look forward to your study and hope that it will provide us with information that will aid us in improving the program. Thank you.

Sincerely,

Juanita Wright
Coordinator of Minority Recruitment

JW/1c