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## Making the college choice: a phenomenological study of high-ability engineering students of color

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Making the college choice: A phenomenological study of  
high-ability engineering students of color

by

Jennifer Lynn Assadi

A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
MASTER OF SCIENCE

Major: Education (Higher Education)

Program of Study Committee:  
Nancy J. Evans, Major Professor  
Daniel C. Robinson  
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Iowa State University

Ames, Iowa

2004

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Graduate College  
Iowa State University

This is to certify that the master's thesis of

Jennifer Lynn Assadi

has met the thesis requirements of Iowa State University

Signatures have been redacted for privacy

To Armand and Gabriel – for their constant  
support, love, and encouragement.

I love you!

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## ABSTRACT

The purpose of this phenomenological study was to investigate and better understand the decision-making process and the factors high-ability students of color use in choosing a college at which to study engineering. Hossler and Gallagher's (1987) 3-phase model on college choice was explored to understand how the participants' college selection experiences relate to the model.

Three in-depth interviews were conducted with students who attended an annual engineering recruitment program held at Iowa State University. The participants included 7 students from 6 different states, 5 African Americans, 2 Latinos, 3 females, 4 males, 4 Iowa State University students, and 3 students attending other institutions that offer engineering.

Four themes emerged from the data. College Choice Process: Universal yet Idiosyncratic revealed that the students experienced a similar process when making their college choice; yet, the way in which they journeyed through this process was quite different. They ranged from one student's "iterative" process to another's simplistic process. Making and Maintaining a Connection focused on the importance of higher education institutions continuously communicating with prospective students. This communication often takes the form of promotional materials, Internet websites, and campus visits. College Choice: A Pragmatic, Independent Decision addressed the practical way students are making their college choice by considering cost/financial aid and location/proximity. Also highlighted was the independence the students reported having when making their college choice; free from the pressure of parents, guidance counselors, teachers, and friends. To Study AND To Play revealed the need for schools to emphasize the quality of both their intellectual and social environments. The students want to attend an institution that offers a balance of both.

Higher education institutions must be aware of their role in a student's college choice. They need to recognize the value of promotional materials they send to prospective students; provide information to students in a new, high-tech, easy to navigate fashion; acknowledge the importance of the campus visit; offer a competitive financial aid package; and highlight both the high-quality education and the social opportunities offered to students.

## CHAPTER 1. OVERVIEW OF THE STUDY

In the 1980s, Congress passed the Science and Engineering Equal Opportunities Act, which stated the United States was responsible for encouraging women and minority students to enter the field of engineering. This act stated that:

the highest quality science and engineering over the long-term requires substantial support from currently available research and educational funds, for increased participation in science and engineering by women and minorities. (as cited in Noeth, Cruce, & Harmston, 2003, p. 2)

Without this diversity in the engineering industry, there is concern that the United States will lose its competitive edge globally. This fear has contributed to the drive for attaining diversity on campuses of higher learning in the United States. In the fall of 2000, students of color accounted for approximately 28 percent of the total college enrollment in degree-granting institutions (U.S. Department of Education, National Center for Education Statistics, 2003); however, the 2000 National Science Foundation report found that African Americans accounted for only 7 percent of all science and engineering bachelor's degrees in 1996 (as cited in Hrabowski, Maton, Greene, & Grief, 2002). Engineering colleges, therefore, need to respond. To assist in their efforts, the American College Testing Program (ACT) completed a report based on information collected during a 12-year period that specifically examined the numbers of women and minority students interested in engineering. Noeth, et al. (2003) reported that the actual number of African Americans planning to major in engineering was lower in 2002 (6,993) than in 1991 (7,085). This finding is alarming and raises a concern that the engineering profession is not reaching the desired level of diversity.

Iowa State University (ISU), a large Midwestern Research I land-grant institution, is striving to achieve diversity among its students, faculty, and staff. President Gregory Geoffroy stressed the importance of addressing diversity on Iowa State's campus. In fact, the Office of the President's website identifies inclusiveness as a core value of the institution, which involves committing to the principles of equality and opportunity. Furthermore, ISU is challenging itself "to be proactive in protecting and advancing the interests of diverse populations and cultures, disenfranchised populations, and in breaking the barriers due to gender, race, physical abilities, economic level, and social status" (Office of the President, n.d.). To address this challenge of diversity on Iowa State's campus, the President's Forum on Diversity was initiated, which involved a semester-long diversity series.

At the college level, Iowa State University's College of Engineering, too, is striving to attain diversity among its departments. In the fall of 2002, Dean Melsa unveiled a new initiative for the College of Engineering entitled, Reach for the Top. This initiative stated, "By the year 2012, the College of Engineering at Iowa State University will be one of the top 20 graduate engineering programs in the country" (Marston Muses: The College of Engineering Alumni News, 2003, p. 1). In order to achieve this vision, the college has identified specific performance objectives for 2008, which include awarding approximately 8 percent of baccalaureate degrees per year to underrepresented students of color. This goal is ambitious, but not unrealistic.

In support of this goal, the College of Engineering funds a program called Preview Day, which is held annually in February and recognizes the scholarship of high school senior students of color. This program is a special day-long program that provides high school students of color with the opportunity to experience campus life and learn more about the

diversified curricula of the engineering college. The College of Engineering assists with travel expenses and room and board for the student and a parent/guardian to visit. During their stay, these students meet numerous faculty, staff, and current engineering students. In addition, they meet with an academic advisor and interact with other new students of color and their families.

Preview Day began in 1998 and has produced varying yields (see Table 1.1). The highest yield occurred in 2002 when 24 of the 29 participants (83%) enrolled at Iowa State. The following year enrollment dropped significantly; only 13 of the 29 students enrolled (45%). In order for both Iowa State University and the College of Engineering to meet the demand for increased representation of students of color, it is important to understand the dynamics influencing the decision-making process and the factors students of color are using in their college choice.

Table 1.1 Summary of Preview Day Yields

	Number Attended	Number Enrolled	Percent Enrolled
Year			
1998	13	5	38%
1999	25	18	72%
2000	15	9	60%
2001	33	23	70%
2002	29	24	83%
2003	29	13	45%

## Purpose

The purpose of this phenomenological study was to explore and better understand the decision-making process and the factors high-ability, students of color use in choosing a college at which to study engineering. This study focused on the process freshmen engineering students used in making their college choice. In addition, this study examined the primary factors that influenced the final college choice of the students. A series of three, semi-structured, in-depth interviews with current freshmen engineering students was conducted. The participants in this study included Preview Day 2003 attendees who chose to study engineering at Iowa State University or at another university in the United States. By collecting this information, I have identified the process and the key factors students of color used in their college decision-making and have provided suggestions to assist student affairs professionals in the recruitment efforts of students of color to their colleges and universities.

## Theoretical Perspective

In many cases, qualitative inquiry, especially phenomenological inquiry, does not utilize a theoretical orientation (Creswell, 2003). In fact, Moustakas (1994) wrote,

Phenomenological approach engages in disciplined and systematic efforts to set aside prejudgments regarding the phenomenon being investigated in order to launch the study as far as possible free of preconceptions, beliefs, and knowledge of the phenomenon from prior experience and professional studies – to be completely open, receptive, and naïve in listening to and hearing research participants describe their experience of the phenomenon being investigated. (p. 22)

Other theorists would argue that no qualitative study can begin from a pure observation. In fact, Schwandt (as cited in Creswell, 2003) believed that “prior conceptual structure

composed of theory and method provides the starting point for all observations” (p. 133). In addition, he wrote:

Theoretical knowledge operates in the classic sense as providing a sense of grasping a *telos*, a sense of our ends and place in the world.... To live well in the world, to inquire into, understand, and direct moral, political, and social life requires a different kind of knowledge, *phronesis* – practical wisdom. Further, the practice of inquiry itself, that is, the bid to understand the social and political world, as Hunter McEwan (1991) explains, is not some atheoretical object – something theories are about; rather it is inherently theoretical, reflecting a contingent theory of what it means to engage in rational, purposeful human action. (Schwandt, 1993, p. 20)

Based on Schwandt’s beliefs, I have identified a conceptual framework that helped inform my inquiry. I have utilized Hossler and Gallagher’s (1987) three-phase student college choice model to assist in creating the conceptual framework needed as a starting point for my research.

Building upon the work of others, Hossler and Gallagher (1987) developed a three-stage developmental model of college choice (see table 1.2). This model portrays the steps students pass through as they learn more about the numerous postsecondary options that exist. This is an interactive model, which incorporates student attributes and organizational characteristics of high schools and colleges and universities.

I have used this model to separate the students’ college choice process into the three phases: predisposition, search, and choice. I realized their individual processes may not clearly fit into these three phases, so I was constantly evaluating. However, as was previously mentioned, researchers must begin from somewhere so this is where I chose to begin.



Table 1.2. Hossler and Gallagher's 3-Phase Model of College Choice

	Influential Factors		
	Individual Factors	Organizational Factors	Student Outcomes
Model Dimensions			
Predisposition (Phase one)	Student characteristics Significant others Educational activities	School characteristics	Search for: a. College options b. Other options
Search (Phase two)	Student preliminary college values Student search activities	College and university search activities	Search for: a. Choice set b. Other options
Choice (Phase three)	Choice set	College and university courtship activities	Choice

### Research Questions

The following research questions were created using the concepts Hossler and Gallagher (1987) proposed in their 3-Phase Model of College Choice.

1. How do engineering students of color describe the process they used in choosing a college to attend?
2. What primary factors influenced the college choice of engineering students of color?
  - a. How do engineering students of color perceive their role, their parent's/guardian's role, other significant adult's role (i.e., guidance counselor, teacher, mentor), and their peer's role in their college choice?

- b. How do engineering students of color perceive fixed college characteristics (i.e., location, costs, campus environment, and the availability of desired program) in impacting their college choice?

The first question relates to the three phases Hossler and Gallagher (1987) identified. I wanted to explore whether the students recognized components important in their college choice in each of these phases. The second question regarding the significant factors that influenced the student's college choice was broken into two areas: individual factors and organizational factors. I chose to do that in order to reflect the model Hossler and Gallagher created regarding students' college choice and the influential factors impacting their decisions.

#### Rationale

Institutions that are located in predominantly White states, such as Iowa, are faced with great challenges in terms of recruiting students of color. Table 1.3 depicts the racial demographics for the state of Iowa. As the table indicates, Iowa has a total minority population of only 6 percent (U.S. Census Bureau, 2000).

Barbara Boose, the communications specialist for the Board of Regents, State of Iowa responded to a question I sent to the Board of Regents regarding the racial/ethnic diversity at Iowa's regent institutions. She wrote:

Enhancing the diversity of the faculty, staff, and students at the Regent institutions is both a legislative mandate and a policy of the Board of Regents. The Board of Regents believes diversity is integral to the mission of its institutions, because educational benefits arise from having a diverse campus community that reflects today's population. It is also a legal requirement, per the Iowa General Assembly's

Table 1.3. State of Iowa Ethnic/Racial Composition

	Number	Percent
Race		
White	2,748,640	93.9%
Black or African American	61,853	2.1%
American Indian/Alaska Native	8,989	0.3%
Asian	36,635	1.3%
Native Hawaiian/Other Pacific Islander	1,009	--
Some other race	37,420	1.3%
Two or more races	31,778	1.1%
Total Iowa Population: 2,926,324 (U.S. Census Bureau, 2000) <sup>1</sup>		

determination that “educational programs designed to enhance the interrelation and cooperation among cultural, racial, and ethnic groups in society require the contribution and active participation of all ethnic and racial groups” (Iowa Code section 262.81). In light of this, the Board of Regents presently aspires to have a student population that includes approximately 8.5 percent minority students. (B. Boose, personal communication, December 23, 2004)

This creates a situation where the Iowa Board of Regents is expecting the regent institutions to reach and maintain 8.5 percent of the student enrollment to be students of color when the state of Iowa only has 6 percent people of color. This produces unique challenges to Iowa

<sup>1</sup> The U.S. Census Bureau reports that a total of 82,483 Hispanic/Latino individuals of any race comprise of 2.8 percent of the Iowa population.

State University and presumably other universities in predominantly White states. These institutions need to heavily recruit students of color from out-of-state to meet their goals. This reinforces the importance of learning the process and factors that are influencing the college choice of students of color.

### Significance of the Study

Choosing an appropriate college or university is a serious decision for students and their families. Each year, colleges and universities throughout the country compete to attract students of color. This creates increased challenges in the recruitment of these students since so many people are competing for limited resources. Due to the importance of this topic, I have identified three significant reasons why this study needed to be conducted. First, very little is known about the decision-making factors that students of color use in their college choice. This study has added to our foundational knowledge regarding this topic.

Second, conducting a study that seeks to understand the college decision-making of engineering students of color has served to advance our understanding of how they make meaning of their college choice. The results of this study will assist admissions staff and engineering recruiting staff in their efforts to attract and recruit students of color to attend their higher education institutions.

Finally, this study is significant because it has the potential to inform the efforts of secondary education professionals. For example, high school guidance counselors could learn more effective ways to support their students of color who are in the process of choosing a college.

### Role of the Researcher

Researchers are reminded of the responsibility placed on them to consider their stance on the issue being studied prior to commencing a research study (Esterberg, 2002). This allows the researcher to make connections between what they know and what they find. In addition, it has been suggested that researchers study topics that are not too familiar to them because it may be difficult to recognize new information. On the other hand, it may be helpful to research an area that is somewhat familiar to the researcher so he/she will recognize possible leads. The research I conducted is a good balance of awareness, but not knowing too much.

I started my graduate program in Educational Leadership and Policy Studies during the fall of 2002, and began my assistantship with the College of Engineering's Outreach and Recruitment Office at Iowa State University. It was at that point when I began my work with students of color. Throughout my life, my experiences with individuals of another race/ethnicity were limited. I was excited to join the Engineering Outreach and Recruitment office and contribute to the recruitment efforts of students of color into the engineering college. Although I did not have a great deal of experience, I was eager to learn.

This learning process transformed into a journey, which was what influenced me to conduct this research. I initially became interested in studying the college choice of students of color because of the work I conduct at my assistantship. In 2003 I was the coordinator of the Preview Day program and hosted 29 students of color and their families on Iowa State's campus. From the viewpoint of the director of the Engineering Outreach and Recruitment office, the 2003 program far surpassed the 2002 program in terms of quality of program and continued follow-up (M. Bruning, personal communication, August 24, 2003); yet the yield

was significantly lower in 2003 than in 2002. This raised a number of questions in terms of what was different between the years that impacted the students' choices. As the coordinator of this program and a student in higher education, I became interested in learning what impacts the college decision of engineering students of color.

Throughout this study, it was important for me to consistently be aware of three factors that had the potential to impact this study. First of all, I may have been considered an "outsider" to the students I interviewed because I am a White researcher exploring the college choice of students of color. Second, I am the coordinator for the Preview Day program, which placed me in a position of authority to them. In addition, I needed to be constantly aware of the thoughts and experiences I associate with my own college choice experience. All of these factors had the potential to impact the relationship I developed with the students and the information I gathered from them about their college choice experience.

#### Context of the Study

Iowa State University, a large Midwestern Research I land-grant institution, is the location where this study was conducted. During the 2003-2004 academic year, Iowa State University's undergraduate student of color population (African American, Hispanic, and American Indian) was 1,143 out of the 22,230 total undergraduate students (5.1 percent) (Office of Institutional Research, 2003). Moreover, there were only 1,080 African American and Latino/a students on Iowa State's campus in fall 2003, which constituted only 4.8 percent of the total undergraduate student population at that time.

The College of Engineering, during fall 2001, enrolled 225 students of color (American Indian, African American, and Hispanic) out of the 4,876 total engineering students. That equates to 4.6 percent. Specifically examining the students of color population

in the engineering college revealed that nearly 4.4 percent of its student population identified as being either African American or Latino/a, mirroring the university's levels (College of Engineering, 2001).

The students who participated in this study were all participants in the 2003 Preview Day program. I interviewed four students who chose to attend Iowa State and three who selected a different institution in the United States. The three additional institutions were: Arizona State University, Cornell University, and Massachusetts Institute of Technology.

Arizona State University (ASU) is a metropolitan, public, research university with three campuses located in Tempe, Phoenix, and Mesa (Arizona State University, n.d.). The undergraduate student enrollment was 42,877 in the fall of 2002 (ASU Fact Book, 2002-03). ASU reported the undergraduate underrepresented student of color population (African American, Hispanic, and American Indian) being 7,459; therefore, suggesting that 17.3 percent of their undergraduate student population identifies as belonging to one of these ethnic minority populations. The Hispanic students are by far the largest ethnic minority population with 5,056 students.

Cornell University (CU) is an Ivy-League school; it is a privately endowed university and the federal land-grant institution of New York (Cornell University, n.d.). CU is located in Ithaca, New York, and offers undergraduate students seven areas in which to study, the College of Engineering being one. For Fall 2002, Cornell University reported that 27 percent of their student body identified as an ethnic minority, which included African American, Asian American, Hispanic American, and Native American (CU Facts: Students, n.d.).

Massachusetts Institute of Technology (MIT) is a privately endowed research university located in Cambridge, Massachusetts (Massachusetts Institute of Technology,

n.d.). The institute is divided into five schools, one of which is the School of Engineering. In 2003-2004, underrepresented ethnic minority groups (African American, Hispanic, and Native American) were represented by 804 out of the 4,112 (19.5 percent) total undergraduate students (MIT Facts, 2004).

#### Tentative Presuppositions

My current work enables me to frequently interact with students of color at Iowa State University. As I have worked with these students, I have learned what was important for them during their college choice process. The following are presuppositions I had based on my conversations with numerous students:

- The financial aid package is one of the most influential factors for these students. Many students of color originate from families with minimal resources to send their children to college. Therefore, the college or university they choose to attend must offer these students substantial financial awards.
- Due to the economy slowing down, I believed students of color would choose an institution that not only offers the program they wish to study, but also has a strong reputation. Securing a full-time position following school is of great concern for all students, and I thought students of color would consider the reputation and quality of the program when considering their options.
- The type of institution is another factor that I assumed would play a significant role for many students of color. Is the college or university predominantly White or does it offer a student body from diverse backgrounds? A great amount of research has focused on students of color attending predominantly White institutions. In fact, many students of color do not feel welcome at such postsecondary institutions. These



students will need to determine if they can successfully complete their degree at an institution where they will be surrounded by others who look different from them.

### Definitions

Individual and societal interpretations of certain concepts often times vary. Therefore, it is important to have a clear understanding of concept definitions prior to implementing a study. The following are definitions of concepts relevant to this study.

**Students of Color** I have utilized the phrase “students of color” rather than “minority students” throughout this paper. The term, minority student, addresses different populations depending on the context. For example, talking about women in engineering would be attending to a minority population; however, that is not what I am addressing in this paper. This study is focused only on racial/ethnic minority students; therefore, I have used the term “students of color.”

It is also important to clearly define who is encompassed in the phrase students of color. For purposes of this study, it only includes African American and Latino/a students. Unfortunately, no Native Americans were a part of Preview Day so they could not be included in this study. Also, Iowa State University and the College of Engineering do not recognize Asian/Pacific Islanders as an underrepresented racial or ethnic minority so they are not involved with Preview Day or in this study.

**College Choice** College choice, in this paper, involves students making a decision on which institution to attend. It does not imply the decision students

make in terms of choosing whether or not to attend a post-secondary institution.

High-ability High-ability was looked at as the College of Engineering recognizes it when they award scholarships. Therefore, students of color are considered high-ability when they receive 26 or higher on the ACT math component and are located in the top 33 percent of their high school graduating class.

#### Organization of Study

This study is organized into six chapters. The first chapter served as a general introduction to the issue under study and described the purpose and significance of the research. Chapter two focuses on a review of pertinent literature, which includes research addressing the process used in making a college choice and the important factors impacting the final college decision. Chapter three describes the methodology used, as well as the research methods imposed; data collection procedures, data analysis, and limitations of the study. Chapter four is composed of profiles of the seven participants in this study and provides a context in which to understand their lives and their college choice. Chapter five presents the findings or emerging themes from the study. Finally, chapter six includes a summary and discussion of those findings, implications for practice, and recommendations for future research.

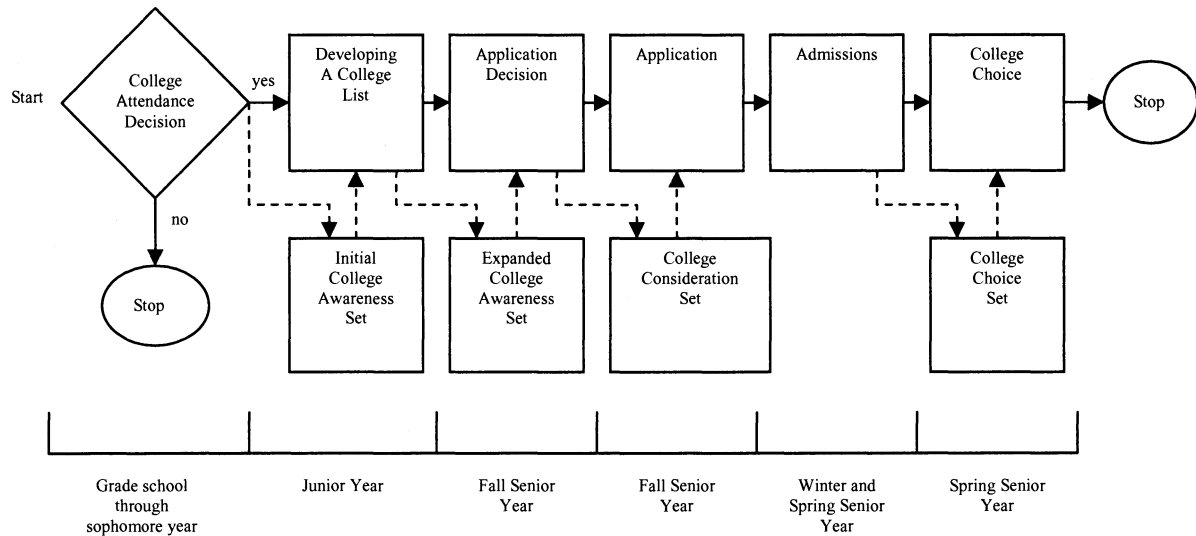
## CHAPTER 2. LITERATURE REVIEW

In order to investigate the college decision-making process and factors for engineering students of color, it was imperative to understand the literature that has already been written addressing this topic. Therefore, I have organized this literature review into two main areas. To begin, I examined the literature on the *process* used in making a college choice. Second, the *factors* that have been identified by students as important in making their college choice were explored. This section was divided into an examination of the factors used by majority students, students of color, high-ability students, and engineering students. Finally, a summary of the literature review is included.

### College Decision-Making Process

College choice has been defined as a developmental process that is funnel-like, starting when the student begins to consider attending a postsecondary institution and ending when the student selects an institution in which to enroll (Chapman, 1981; Gilmour, Spiro, & Dolich, 1981). For the past four decades, researchers have been exploring the process and the factors that students use in determining their college choice. Building upon the work of Richards and Holland (1965), Tinto (1973), and Anderson (1976), Gilmour, et al. (1981) conducted an exploratory study that utilized in-depth interviewing with college freshmen and high school seniors with the purpose of learning more about the process high school students use in selecting a college and developing a paradigm that described the process. This research agreed with Kotler's theoretical conception (as cited in Gilmour, et al.) of the high school student's college selection process, finding that the college choice process is "funnel-like." Based on the study's results, Gilmour, et al. supported the college selection paradigm (see figure 2.1) created by Kotler, which involved six steps.

Figure 2.1. College Selection Process Paradigm



The first step involves making the college attendance decision. This occurs from grade school until the student's sophomore year. This is the time when the student decides whether or not to attend college. The second step includes developing a college list, which typically occurs sometime during the student's junior year of high school. At this step, the student develops a list of potential colleges to attend. The third step is when the student makes the application decision, which generally happens during the fall of the student's senior year. The student decides which colleges from the list he/she will apply to in the fall of his/her senior year. Step four is when the student submits applications to his/her selected colleges. This occurs during the winter or spring of the student's senior year. The fifth step is called admissions. Again, this typically happens during the winter or spring of the student's senior year. The student receives notices of acceptance from the colleges to which he/she has applied. The final step is when the college choice is made. Students generally make this decision during the spring term of their senior year, and base their decision on the student's

perception of which institution offers the highest quality program. Unfortunately, the respondent's racial/ethnic background was not noted in this study; therefore, how this model would be applied to students from various racial/ethnic backgrounds is not known.

As mentioned previously, I have also examined the work of Hossler and Gallagher (1987) regarding their three-phase model on student college choice. In phase one, predisposition, postsecondary institutions have little impact on a student's college choice. This is the developmental phase when students are deciding whether or not they will pursue a college degree. Students at this phase may be searching for college options and are examining the quality of instruction, attitudes towards education, information on financial aid, and institutional costs. During the second phase, search, colleges may have some impact on a student's college choice. The students are searching for the characteristics and values that describe several higher education opportunities and help students identify what is important for them to consider in their college choice. Finally, during the third phase, choice, the student creates a choice set and decides on the final college to attend. By this point, institutions have minimal influence on the decision students make.

Both of these studies include the same steps; however, Gilmour, et al. (1981) classified the process into six steps rather than the three into which Hossler and Gallagher (1987) condensed them. Therefore, there are basically three steps that a student must go through while making his/her college choice: a decision to attend or not attend, the search process, and the final decision. All students who enroll in an institution more than likely will have journeyed through this process.

## College Decision-Making Factors

Two approaches have been identified that consider the influences and factors students use while completing the college decision-making process. The first is a social-psychological approach, which includes the work of Richards and Holland (1965), Tinto (1973), Anderson (1976), and others, who identified four basic types of influences: academic program, social climate, cost and location, and influences of others (e.g., parents, friends, guidance counselors, teachers). The second approach was an economic perspective, which recognized that students will maximize the perceived cost-benefits of each option (Dixon & Martin, 1991).

### *Majority Students*

Richards and Holland (1965) utilized the Student Profile Section of the American College Testing examination (ACT), which offers background information about the students taking the test. A factor analysis was completed on the students' explanation of their college choices and the original 27 factors were narrowed down to four major areas of influence: intellectual emphasis (quality of faculty, reputation, scholastic standards, curriculum, and intellectual environment), practicality (location and cost), advice of others (parents, alumni, high school teachers and/or guidance counselors), and social emphasis (social climate, athletic program, Greek system, and coeducation). These four major factors influencing students' college choice appeared to be similar for males and females. Unfortunately, racial/ethnic breakdown was not discussed so the reader is left with an unclear picture of whether or not these are the factors that are important for students of color, as well as for Caucasian students.

Tinto (1973) studied the effect of college proximity upon rates of college attendance for Illinois and North Carolina high school graduates in 1966. He found that “proximity of a college in all but the large urban areas...is of minor importance in determining a high school graduate’s going on to post-secondary school, and that the proximity of public junior colleges was a significant factor in attendance for mostly lower-ability persons rather than for higher-ability individuals of lower-status” (p. 292).

Another study was completed examining the attractiveness of colleges and universities to high-ability, prospective students by examining the institutional characteristics that impact the institution’s image. The data were collected from those students who scored in the top third of all students who took the National Merit Scholarship Exam in 1964-65 and 1972-73. Results indicated that “low tuition, well-credentialed faculty, research orientation, and fiscal strength appear as the important factors in raising institutional attractiveness” (Anderson, 1976, p. 361).

In addition, college choice has been found to be impacted by the academic program, cost, location, parents, guidance counselors, and alumni (Gilmour, et al., 1981). These researchers also found that students and parents lack the required skills and knowledge to evaluate the information received from colleges. The primary college choice was made by the student, rather than significant others. In fact, peers played less important roles than was expected.

MacKenzie (1985) conducted a telephone survey with a random sample of high school students who had been admitted to the University of California at Davis to explore the considerations they used in selecting a college. MacKenzie’s findings echo those of many prior researchers in that location, academic quality, size of institution, and cost were all

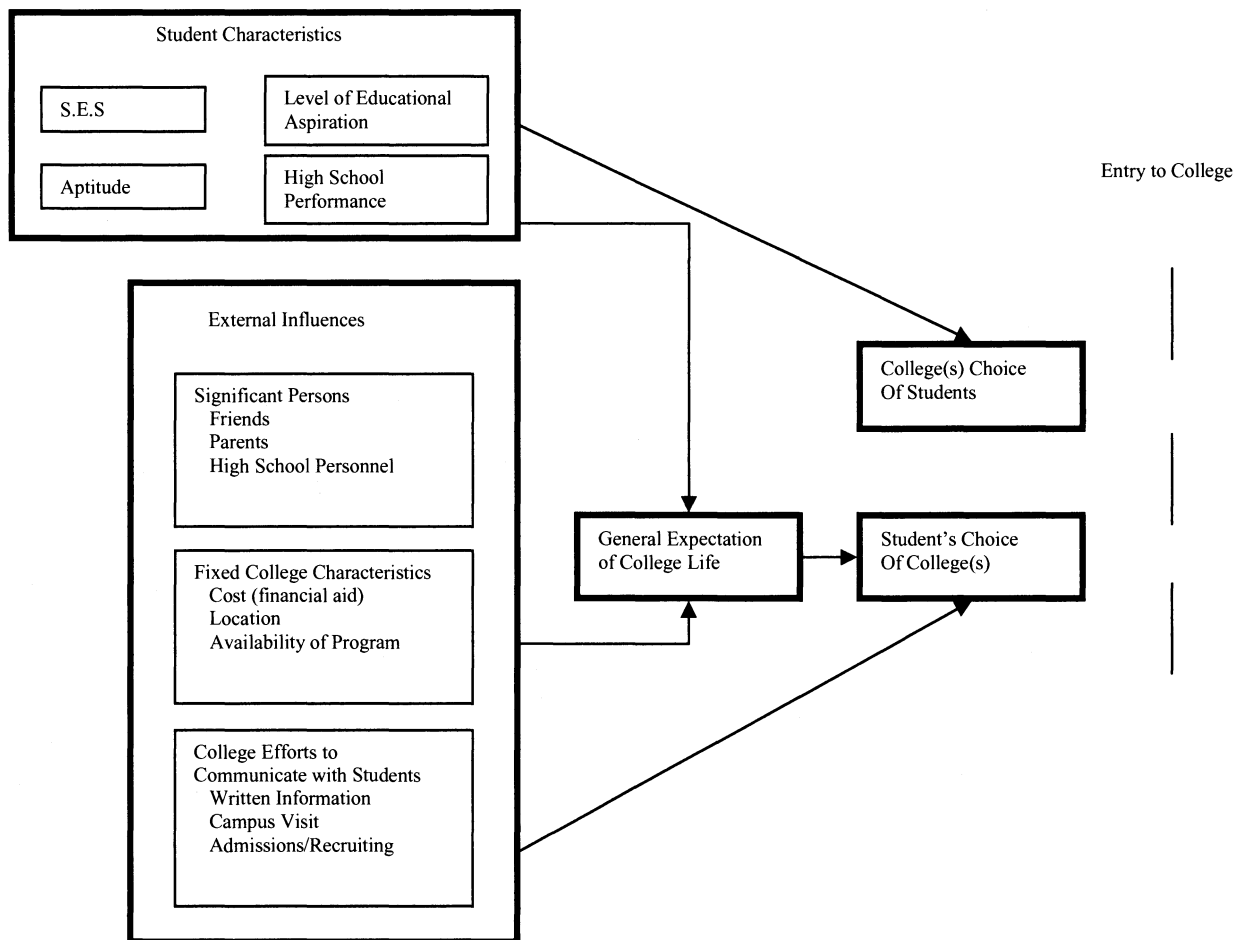
identified as important factors that influenced the decision for many students. Contradicting the previous study, MacKenzie found that family/friends' recommendations greatly influenced the college decision. In addition, career preparation and prospects were not considered an important priority when selecting a college.

Students who were admitted to John Carroll University in 1984 were surveyed regarding the qualities they found important in their college choice (Welki & Navratil, 1987). Parental preferences, distance from home, location, student-faculty ratio, cost and financial aid opportunities, campus attributes, academic programs, and size of the school were the most important variables students identified.

Kellaris and Kellaris (1988) surveyed freshman and transfer students to learn about the factors that influenced their college decision to attend a small, private, church-affiliated institution. This study allowed the researchers to empirically test the five-component conceptual model of college selection behavior that was proposed by Chapman (1981) (see figure 2.2). This model was longitudinal and suggested that to understand a student's college choice, it is necessary to consider student characteristics, such as socioeconomic status, aptitude, level of educational aspiration, and high school performance. In addition, external influences must be considered, such as the influences of significant persons, fixed institutional characteristics, and the institution's efforts to communicate with prospective students. After analyzing the survey results, Kellaris and Kellaris found the most important college decision-making factors included: first-hand impressions, personal recommendations, academic programs, college distinctiveness, and location. Therefore, it appears as though this research supported the theoretical model proposed by Chapman.



Figure 2.2. Chapman's Conceptual Model of College Selection Behavior



Additional work was conducted by Trusheim, Crouse, and Middaugh (1990) specifically examining college applicants' attitudes and enrollment decisions. This study included a random sample of applicants who were offered admission to the University of Delaware. The authors utilized an admissions survey to obtain their data. Using this instrument, they collected demographic information and the applicant's importance and attribute ratings of 18 various characteristics. The results indicated that an applicant's college decision is impacted by his/her attitudes toward the specific colleges. In this study, attitudes were defined as "the importance the individual attaches to a specific attribute of a college or

university and the belief that a specific institution possesses that attribute” (Trusheim, et al., p. 300). The factors this study revealed as among the most important were: quality of academics, quality of programs in the applicant’s major, proximity to home, and the university’s general reputation. Again, this study did not indicate the racial composition of those surveyed so the reader is uncertain as to the racial/ethnic background of individuals who considered these attributes important.

Dixon and Martin (1991) developed a scale to measure the potential factors influencing a student’s decision to attend an institution. They created a 25-item scale that had five subscales: 1) attitudes toward the specified institution, 2) life planning influence on attendance, 3) others’ influence on attendance, 4) independence/recreational reasons for attendance, and 5) family tradition of attendance at the specified institution. These five subscales mirrored much of the prior research. This was the first study that explicitly revealed the racial/ethnic background of the participants. In this case, 3.7 percent were Black, 3.7 percent were Hispanic, 1.1 percent were Asian, and 91.5 percent were White. This study still did not identify what the students of color consider to be important in their college choice because a comparison was not made among the racial/ethnic groups in the sample.

A group of freshmen were asked to complete a questionnaire with the purpose of determining when a student begins thinking about college, when the final decision is made, the important factors that influenced the decision, and where students are receiving their college information (Johnson, Stewart, & Eberly, 1991). Results indicated that students begin thinking about college at an early age and make the final choice at some point during their senior year. The factors that were viewed as most important to the students were academic reputation and quality of the available programs. In addition, cost and financial aid were high

on the list as well. Surprisingly, the preference of family was rated lower on the list, which contradicts much of the previous research that indicates that family influences the decision. However, this report supported earlier work in that preference of friends was not rated of high importance.

Smith and Matthews (1991) conducted telephone surveys with freshman students admitted to a large public university in the Southwest. The purpose was to learn the factors that were important in choosing a college and to determine which factors actually predicted entry into a specific institution. The researchers found that the most important factors in choosing a college included: the prospect of landing a job after graduation, the opportunity to pursue an advanced degree, academic reputation, and reasonable costs. The best predictors, though, included: availability of financial aid, having relatives as alumni, and the advice of friends.

Canale, Dunlap, Britt, and Donahue (1996) investigated the importance of college characteristics in influencing the college choice of students. They utilized telephone interviews with high school juniors and seniors and found that the quality and accessibility of teachers at the institution greatly impact the students' college decision. In addition, the institution must offer the program the student wishes to study, have a reputable academic program, and offer a reasonable cost in order to have prospective students even consider the institution.

Hodges and Barbuto (2002) conducted telephone interviews with high school seniors to learn what is instrumental when choosing a postsecondary institution. The findings support much of the research that had been conducted before. Financial aid and quality of academics were rated as the most important factors to these students regarding their college choice. In

addition, athletics had little impact on the college selection process, which has been reported by other researchers. Surprisingly, proximity was not an important factor, nor was contact with admissions staff, current students, alumni, or faculty members.

Stamats is a marketing and communications program that assists enrollment managers at numerous colleges and universities. Stamats (2002) conducted a nationwide telephone survey with high school juniors and seniors to learn what they believe are the most important college characteristics. Results indicated that students are most concerned with the academic programs that are offered and more importantly, they must be of high quality. In addition, students want to be reassured that they will obtain a good job upon graduation. During this same survey, the researchers also asked who were the top influencers in the college decision. Overwhelmingly, parents were recognized as key influencers (70%). Also included were other relatives (12%), friends (5.6%), guidance counselors (3.5%), and high school teachers (3%).

Hoyt and Brown (2003) surveyed high school graduates regarding their college choice factors. Results indicated that cost of tuition and ability to work while going to college were the two most important factors identified in students' college choice. Additionally, receiving a scholarship, the availability of desired program, and variety of class offering times were also significant in impacting their college decision. Therefore, this study supported much of the earlier literature by classifying the academic reputation, quality of faculty, location, costs, financial aid, and student employment opportunities as important factors. Furthermore, this study offered additional factors to consider that had not been previously identified: flexible course offering times and a variety of delivery methods (i.e., Internet courses).

A recent study conducted by StudentPOLL (2004) indicated that the campus visit was very influential in students' college decisions. These findings are based on in-depth telephone interviews with a random national sample of high school seniors who plan to enroll in four-year colleges the following fall. The hospitable nature of the community and the friendliness of the people students encountered during their visits appeared to positively influence their interest in a particular school. In addition, touring facilities, meeting with faculty, and attending a class all served to increase the interest level the students had in the college or university. These findings reveal the importance and the role a campus visit has in informing students during their college choice.

### *Students of Color*

Minimal research has focused on the college choice for African American students, and even less is known for other racial/ethnic minority groups (Hossler, Braxton, & Coopersmith, 1989). In fact, much research has examined the decision of people of color as to whether or not to attend a postsecondary institution (Perna, 2000; Pope & Fermin, 2003), rather than addressing the process and the factors they considered integral in their college decision.

One study that did focus on the college decision of students of color was conducted by Stewart and Post (1990). A questionnaire that included both open- and closed-ended questions was given to students who identify as African American, Hispanic, Asian, Native American, and Appalachian White at a large predominantly White institution in the Midwest. The primary factors these students identified were proximity to home, school reputation, and academic reasons. A further analysis was conducted to evaluate whether there were any differences found among the various racial/ethnic groups. In fact, there was a significant

difference found in the reasons African Americans choose an institution compared to other students of color. African Americans reported being close to home and financial assistance as important in influencing their decision. Hispanics reported that the school's reputation influenced their decision more than closeness to home and financial assistance.

Johnson, et al. (1991) asked freshmen to complete a questionnaire with the purpose of determining when a student begins thinking about college and when the final decision is made, the important factors that influenced the decision, and from where students are receiving their college information. The authors examined the results comparing African American student responses and White student responses. This analysis revealed that African American students were more concerned with costs, financial aid, academic reputation, and distance from home than were White students. Finally, African American students are receiving college information from college students, friends, and their high school counselors. Most notably, when examining racial differences, African American students rely upon their guidance counselor for college information; whereas, White students obtain information from college students.

Smith and Matthews (1991) conducted telephone surveys with freshmen students admitted to a large public university in the Southwest. The purpose was to learn the factors that were important in choosing a college and which factors actually predicted entry into a specific institution. The authors found the African American and Hispanic students rated scholarships and grants and the advice of teachers or guidance counselors as more important factors than did White students. In addition, African American and Hispanic students considered publications and letters and traditions and activities as less important than White students. Finally, African American students rated the handling of the admissions

applications and the advice of friends as more important than either of the other racial/ethnic groups.

College-bound African American high school juniors were surveyed regarding the factors that affect their institutional choice (Sevier, 1992). Results revealed four items that impacted most of the students: 1) reputation of the college, 2) availability of a specific major, 3) total cost of attending, and 4) availability of financial aid. In addition, the students were interested in obtaining information about the career outcomes after receiving a degree from the institution. Similar to the general population, African American students deemed it very important to visit the campus and included their parent's opinions when selecting a college. However, African American students also sought advice from a religious mentor, school employee, or coach.

Bradshaw (2001) felt that studies on college choice that have placed various minority groups together have likely masked the important differences among the different racial/ethnic groups. Therefore, he conducted a quantitative methodological study to examine the college decision-making processes of racial/ethnic students who identified as: a) Native American, b) Asian/Pacific Islander, c) Hispanic, d) African American, e) White, or f) other. Six factors that have been found to be integral in the college decision of students were used in this study. The results are as follows. African Americans rated the academic factor higher than all other groups. Therefore, the quality of faculty, quality of major of interest, overall academic reputation, and quality of academic facilities were all considered more important to African American students. The service expectation factor was rated much higher for Hispanic students than any other subgroup. This factor included: variety of courses, access to faculty, and concentration on undergraduate education. Asian/Pacific Islanders reported the

lowest satisfaction in terms of the cost factor. The athletics factor was rated higher by Native Americans than any other group. Availability of extracurricular programs, availability of religious activities, quality of social life, quality of on-campus housing, and chance to be with students from a different background worked together to create the student life factor. Hispanic students rated this higher than any other racial/ethnic group, followed by African American and White students. Finally, the location factor was rated significantly lower for Asian/Pacific Islander and African American students. This factor entailed access to off-campus cultural and recreational opportunities, attractiveness of the campus, surroundings, part of country location, and ease of getting home.

#### *High-Ability Students*

Not much research has focused on the college choice of high-ability students; however, a few researchers have addressed the topic. Anderson (1976) examined the attractiveness of colleges and universities to high-ability, prospective students by examining the institutional characteristics that impact the institution's image. The data were collected from those students who scored in the top third of all students who took the National Merit Scholarship Exam in 1964-65 and 1972-73. Results indicated that "low tuition, well-credentialed faculty, research orientation, and fiscal strength appeared as the important factors in raising institutional attractiveness" (p. 361) to those high-ability students.

Another study conducted by Douglas, Powers, and Choroszy (1983) focused on learning the most important reasons high-ability students chose a specific institution and what factors underlay those reasons. A survey was sent to gifted students at an institution in the Southwest. Results indicated that quality of course instruction, training in their career interest, professional competence of professors, overall training, intellectual stimulation



provided by training, and an opportunity for professor-student discussion in courses were the six most prevalent priorities in selecting a higher education institution. In addition, high-ability students recognized three areas of academic quality that influenced their decision: 1) instruction, 2) interaction, and 3) independence of thought. Like most other studies, this one did not differentiate among students from various racial/ethnic backgrounds; however, the authors recognized the importance for future research to evaluate the reasons high-ability “minority” students select specific postsecondary institutions.

Weiler (1996) conducted a study to evaluate the college decisions of high-ability students by surveying them using the College Board’s Admitted Student Questionnaire Plus. These students were classified as being in the top half of the class admitted into a selective private research university. The results of this empirical analysis suggested that the college choices of high-ability students in this sample were influenced by the net cost of attendance at the institution. However, the impact of this factor was reduced as the student’s parental income increased. In addition, non-monetary factors were considered by students as very important as well. These factors include housing, recreational options, availability of majors, and a focus on undergraduate education. The survey used in this study asked for race/ethnicity; however, no analysis was conducted to learn if there were any differences among students of various racial/ethnic backgrounds.

Bradshaw, Espinoza, and Hausman (2001) conducted a qualitative inquiry into the factors 16 high-ability students attribute to their college choice. This study included one student who identified as a racial minority; however, the results did not discuss any differences found between races. None of the students recalled ever thinking they would not attend college. This finding actually contradicts many of the college decision-making models

that identify the first stage of this process as the time to determine whether or not to attend a postsecondary institution. For these students, it was something they always knew they were going to do. In fact, it was the desire of high-ability students to attend a college with a high quality academic program. They wanted to attend good colleges that would challenge them academically. All students reported being influenced by teachers, counselors, and peers to consider prestigious out-of-state institutions. However, the impact of financial support was critical in their decision. Each student recognized that if they had not received a scholarship, they would not even consider the institution. Furthermore, the final decision to attend a college hinged upon the scholarship offer. Parents of these high-ability students were very involved in the planning and decision-making, but they played more of a supportive role that allowed their children to make the decision for themselves.

Stamats (2004) examined the importance of college attributes for “A” students compared to “B” students by conducting a nationwide telephone survey of 603 college-bound high school juniors and seniors. Only one area was found to be more significant for the “A” students and that was the academic reputation of the program. The “B” students placed more emphasis on the school being career focused, campus being safe and well-maintained, low cost, and availability of recreation facilities. Therefore, if colleges and universities wish to attract higher-achieving students they must make sure to market the school’s quality of education by sharing where they rank academically, what awards they have received, and what the outcomes are of receiving an education at that particular school.

### *Engineering Students*

Minimal research has addressed the college choice process and factors for students considering studying engineering. I found one study conducted by Webb (1988) that focused

on this topic, surveying mostly white (88.7%), male (77.7%), upper middle-class (64.5%) students. The primary intent of his study was to identify the institutional characteristics students planning to major in engineering considered important in their college selection process. A random sample of high school juniors from the South who took the ACT exam and scored a 21 or higher, reported a high school grade point average of 2.5 or higher (on a 4.0 scale), and indicated engineering as the first choice for an academic program were selected to participate in the study. Results indicated that parental influence, academic reputation, availability of major, and entrance requirements are more important factors for engineering students than for the general population. In addition, high job placement upon graduation and having well-known successful alumni were found to increase the likelihood that a student would choose a specific institution. Another finding was that engineering students of color considered financial aid availability, opportunities for religious activities, and smaller institutional size as important factors in making their college choice.

Together, all of these studies which have focused on students' college choice discuss four basic types of influences and factors considered by students in their decision-making about college: 1) academic program (reputation, quality, faculty, etc), 2) social climate (social life, athletic programs, Greek system), 3) cost and location (tuition, proximity to home), and 4) influences (parents, guidance counselors, alumni, teachers).

### Summary

This review of literature on the process and factors that influence a student's college choice is not all-inclusive. Large amounts of research have examined the process and factors that were reported by the general population of college students as significant in their college choice. In addition, several researchers have addressed the factors important to high-ability

students and to students of color. However, I perceive two significant gaps in the literature that I have addressed with this study. First of all, this study specifically focused on students of color studying engineering. As previously discussed, Webb (1988) studied the college choice of students selecting engineering as their intended major; however, I did not locate any research to date that has explored college choice for students studying engineering who identify as being students of color. Therefore, I examined the process and college choice factors that are important to engineering students of color.

Secondly, much of the research reviewed on college decision-making processes and factors revealed that many researchers have utilized conceptual models, surveys, and questionnaires to explore students' college choice behaviors. Unfortunately, many of these studies included a predetermined list of possible influences for students to choose among. These quantitative approaches do not allow the voices of the students to be heard, or a clearer understanding of the various factors that influenced their decision to be learned. In addition, there is some thought that surveys inquiring about college choice factors may not elicit responses that are truly predictive of the final college decision. This study utilized a qualitative inquiry involving three in-depth interviews with seven students of color to hear their voices on the complex phenomenon of their college choice.

### CHAPTER 3. METHODOLOGY

Prior to conducting a study, it is necessary to determine how the project will be designed. Therefore, in this chapter I have discussed the methodology and methods employed in this study. I start by sharing the general methodological approach and the philosophical assumptions I brought into this study. Second, the research approach utilized in this study is introduced. A discussion of the participants follows. Fourth and fifth, the data collection and data analysis procedures are discussed. Sixth, design issues, such as credibility, transferability, dependability, and confirmability are addressed. Finally, the delimitations and limitations of the study are recognized.

#### General Methodological Approach and Philosophical Assumptions

Qualitative research models have common features that distinguish them from quantitative approaches. These common bonds include:

1. recognizing the value of qualitative designs and methodologies, studies of human experiences that are not approachable through quantitative approaches,
2. focusing on the wholeness of experience rather than solely on its objects or parts,
3. searching for meanings and essences of experience rather than measurements and explanations,
4. obtaining descriptions of experience through first-person accounts in informal and formal conversations and interviews,
5. regarding the data of experience as imperative in understanding human behavior and as evidence for scientific investigations,
6. formulating questions and problems that reflect the interest, involvement, and personal commitment of the researcher, and

7. viewing experience and behavior as an integrated and inseparable relationship of subject and object and of parts and whole. (Moustakas, 1994, p. 21)

Based on these features, I chose to utilize a qualitative research approach to explore the process and the factors engineering students of color use in making their college choice. In addition, a qualitative approach appeared to be most appropriate given the purpose of this study, which was to explore and understand the meaning the participants had made of their college choice process and factors guiding their college decision.

To guide my design, I drew from the work of Crotty (1998), who introduced four connected elements that must be addressed in any qualitative research process: 1) epistemology, 2) theoretical perspective, 3) methodology, and 4) methods. He suggested that each element informs the next. Prior to conducting a qualitative design, researchers must consider their perspectives on each of the elements. Figure 3.1 reflects the overall design and approach I used in the study.

Figure 3.1. General Methodological Approach

Epistemology: Constructionism

—————→ Theoretical Perspective: Interpretivism

—————→ Methodology: Phenomenology

—————→ Methods: In-depth interviewing

Epistemology, as defined by Crotty (1998), is “the theory of knowledge embedded in the theoretical perspective and thereby in the methodology” (p. 3). Maynard (as cited in Crotty) wrote that “epistemology is concerned with providing a philosophical grounding for deciding what kinds of knowledge are possible and how we can ensure that they are both adequate and legitimate” (p. 8). In essence, it is the way we understand and explain how we know what we know.

Crotty (1998) identified three epistemologies: 1) objectivism, 2) constructionism, and 3) subjectivism. The epistemological position taken with this study was that of constructionism, “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context” (Crotty, p. 42). I believe that meaning is not discovered but that it is constructed by individuals as they interact with the world they are interpreting. Therefore, I explored with my participants how they as individuals of an underrepresented racial/ethnic group had made meaning of their college choice process and the factors associated with their decision. As a result of using this position, I recognize that I have not created definitive knowledge, but instead I have constructed knowledge that may only be used to inform or suggest.

Theoretical perspective was the second element of the research process that Crotty (1998) identified and described as “the philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (p. 3). In other words, it is a way to look at the world and understand it. He recognized that in stating a theoretical perspective, researchers are stating the assumptions they bring into the research project. In addition, he reported that theoretical perspectives are related to particular

epistemological positions. For example, constructionism informs the interpretivist theoretical perspective, which is what was employed in the study. Interpretivism emerged in an attempt to “understand and explain human and social reality” (p. 67). Therefore, I have attempted to derive an understanding of the participants’ interpretations of their college choice.

The third element of the research process Crotty (1998) discussed was methodology. This concept refers to the “strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes” (p. 3). A phenomenological methodology was employed in this study, which is discussed in greater detail in the research approach section.

Research methods refer to the “techniques or procedures used to gather and analyze data related to some research question or hypothesis” (Crotty, 1998, p. 3). The specific method I used in this study is in-depth interviewing. The section on data collection procedures further describes the in-depth interviews.

### Research Approach

This study utilized a phenomenological qualitative research methodology. During a phenomenological inquiry, a researcher identifies the “essence” or “essences” of human experiences regarding a specific phenomenon or experience (Creswell, 2003; Merriam & Associates, 2002; Patton, 1990), which leads to ideas, concepts, judgments, and understandings (Moustakas, 1994). In short, phenomenological inquiry asks the question: “What is the structure and essence of experience of this phenomenon for these people?” (Patton, p. 69). Essences are described as the core meanings of people’s understandings that serve to characterize or identify a particular phenomenon. The phenomenon explored in this



study was the process students of color go through and the factors they believe impacted their decision of which higher education institution to attend.

Phenomenology as a philosophical tradition began from the work of Edmund H. Husserl (1859-1938) (as cited in Patton, 1990). Husserl described phenomenology as being the study of how phenomena are described and experienced through a person's senses. A basic assumption he carried was, "we can only know what we experience by attending to perceptions and meanings that awaken our conscious awareness" (Patton, p. 69). Thus, a phenomenologist tends to create a worldview based on the perceptions people make of their experiences. Researchers can go about this in two different ways. First of all, they can conduct interviews with persons who have experienced the phenomenon even though the researcher has not experienced the phenomenon first hand. The second way is to actually experience the phenomenon under investigation by conducting participant observations. Researchers can choose between the two methods or incorporate them both into their study.

In this study, I employed in-depth interviews with students who have experienced the phenomenon of college choice in order to understand the *what* and the *how* of the participants' experiences. My focus was to understand what these students experienced in terms of their college choice, as well as how they interpret the world around them. As Worthen (2002) said, "This method of inquiry [phenomenology] can be very exhausting and hugely rewarding, ultimately adding meaningful understanding to the experience we call life" (p. 141).

### Participants

Moustakas (1994) reported that there are no in-advance criteria that can be used to select the research participants in a phenomenological study. Instead, there are general

factors that must be considered, such as age, race, and gender. In addition, there are several essential criteria:

The research participant has experienced the phenomenon, is intensely interested in understanding its nature and meanings, is willing to participate in a lengthy interview and (perhaps a follow-up interview), grants the investigator the right to tape-record, possibly videotape the interview, and publish the data in a dissertation and other publications. (Moustakas, p. 107)

Based on these criteria, I identified the following requirements for participants in the study:

1. self-identify as a student of color studying engineering,
2. recognize they have gone through the college choice process,
3. be willing to explore the meaning they made of their college choice.

In addition, I wanted to obtain a gender balance among my participants; therefore, I was somewhat purposeful in obtaining my sample.

In terms of sample size, I had determined to start with six participants; however, due to a high level of interest, I ended up interviewing seven students. This number allowed me to reach data saturation, a point where I was hearing similar information from my respondents.

My work at the College of Engineering's Outreach and Recruitment office had enabled me to develop relationships with students who fit the criteria specified for this study. I hosted Preview Day 2003 and I invited those participants to take part in the study. I sent an email (see Appendix A) to 26 of the 29<sup>2</sup> students who attended Preview Day 2003 in order to

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<sup>2</sup> I conducted a follow-up with all the students who attended Preview Day in 2003. Of those, there was one student who I could not reach and for whom I no longer have any current contact information. In addition, there were two students who chose not to study engineering at college.

solicit volunteers. Of those who volunteered, I selected respondents based on:

- a) are they currently studying engineering,
- b) location of hometown,
- c) type of institution chosen,
- d) gender, and
- e) identify as either African American or Latino/a.

A detailed summary of my participants is found in Table 3.1. My participants included: three women and four men; two Latinos and five African Americans; four Iowa State University students and three non-Iowa State University students; and a representation of students from all over the United States

Table 3.1. Participant Summary

Name	Race/Ethnicity	Gender	Home State	Institution
Camila	African American	Female	Alabama	ISU
Carlos	African American	Male	California	ISU
Diana	African American	Female	Maryland	CU
Green	African American	Male	Missouri	ISU
James	Latino	Male	Iowa	ISU
Michael	Latino	Male	Nebraska	ASU
Shirley	African American	Female	California	MIT

ISU = Iowa State University

CU = Cornell University

ASU = Arizona State University

MIT = Massachusetts Institute of Technology

### Data Collection Procedures

I utilized in-depth, phenomenologically based interviewing as Seidman (1998) introduced it. This method “combines life-history interviewing and focused, in-depth interviewing informed by assumptions drawn from phenomenology” (p. 9). The goal of the approach is to have the participants reflect upon and reconstruct their experiences regarding the phenomenon being studied. “At the root of in-depth interviewing is an interest in understanding the experience of other people and the meaning they make of that experience” (Seidman, p. 3).

In-depth, phenomenological interviewing requires three interviews to be conducted with each participant, exploring: 1) the context of the participant’s life, 2) the details regarding their experience with the phenomenon being studied, and 3) the meaning they have made from their experience (Seidman, 1998). This assists the researcher in gaining a context of the life of each participant, which is an essential component of a phenomenological study. The length of each interview should be around 90 minutes, and they should be spaced approximately three to seven days apart. This allows the participant and the interviewer enough time to reflect on the interview without forgetting what was discussed. To see a list of interview questions, see Appendix B.

Focused Life History, the first interview conducted in Seidman’s (1998) three interview series, has the primary purpose of putting “the participant’s experience in context by asking him or her to tell as much as possible about him or herself in light of the topic up to the present time” (p. 11). Researchers ask participants to share about experiences they have had with their families, at school, with friends, or in their neighborhoods (Seidman).

I used this first interview to gain a sense of my participants' family background and parents' educational attainment. In addition, I inquired about their elementary and secondary schooling to learn about the type of education they received. I also wanted to learn about the community in which they lived. Were they raised in an area where they were always a "minority" or did they live in areas with a dominant population of the racial/ethnic group in which they identify? This offered me a context in which to put their lives when they began thinking about college.

The Details of Experience, the second interview of Seidman's (1998) three interview series, focuses on the details of the participants' experiences in the situation being studied. It is important to ask for the details and not just the opinions of the participants. One way to go about doing this is to specifically ask them to tell you a story about their experience.

As Seidman (1998) suggested, it was important for me to obtain the details and not the opinions of my respondents. All of them already have spent one semester in the institution they chose to attend. I did not want to focus on whether or not they are happy or disappointed with their decision. I was more concerned with learning about what caused them to choose that institution. It was important for me to remain focused on the study's purpose to keep us moving in a positive direction.

Reflection on the Meaning, the third interview of Seidman's (1998) three interview series, asks the participants to reflect on the meaning of their college choice experience. In order to do this, participants must be able to reflect on how they got to where they are currently. Seidman wrote, "The third interview can be productive only if the foundation for it has been established in the first two" (p. 12). Therefore, participants must clearly understand

their past and know the details of their current experience before being able to truly make meaning from it.

Prior to conducting any of the interviews, I had a preliminary meeting with each participant who was currently enrolled at Iowa State University to review and sign the informed consent document (see Appendix C). For those participants who enrolled at a distant institution, I mailed them two copies of the informed consent document and enclosed a letter asking them to contact me if they had any questions. If they did not, they were to sign the informed consent document and return one copy to me in the self-addressed stamped envelope I had provided and they were to keep the other copy for their own personal records. Upon receipt of each participant's informed consent document, I began scheduling interview times. Each interview conducted with my participants was tape recorded. In addition, all of the tapes were transcribed verbatim. I personally transcribed the first two interviews with each of my participants, excluding two interviews, which a colleague of mine transcribed. In addition, I hired another colleague to transcribe all of the third interviews in order to allow me time to focus on other areas of the study.

Throughout the process of data collection I maintained my own personal journal or field notes. Esterberg (2002) recommended writing detailed field notes immediately after completing an interview. She suggested recalling all of the small details, such as the setting, the participant's appearance, and any part of the interview that was surprising. She also suggested writing about your own impression of the interview. In addition to keeping field notes, I maintained a methodological journal noting possible theoretical ties. However, as Seidman (1998) suggested, I did not conduct any in-depth analysis of the interview data until I had completed all of my interviews.

### Data Analysis Procedures

The challenge of qualitative data analysis is “to make sense of massive amounts of data, reduce the volume of information, identify significant patterns, and construct a framework for communicating the essence of what the data reveal” (Patton, 1990, pp. 371-372). However, there are no absolute rules to follow in conducting data analysis except to do so in a reliable and valid fashion. To assist in the data analysis of my study, it was appropriate to employ the process Seidman (1998) proposed since I used his in-depth phenomenological interviewing approach in this study. I followed his suggestion of postponing in-depth analysis until all interviews had been completed; however, I identified important topics during some of the early interviews. It was imperative, though, that I did not impose the meaning I had made from one participant onto the experiences of another participant.

Transcribing interview tapes is the first step in data analysis (Seidman, 1998). This is a time-consuming task, which took approximately four to six hours for every 90-minute tape. Transcribing an interview verbatim offers a more complete representation of the interview. In addition, it is important to catch the nonverbal messages, such as laughs, pauses, sighs, etc. Taking time to note both the verbal and nonverbal material was especially helpful when I began reviewing the transcripts months after the interview had been conducted.

The second step to conducting data analysis is to study, reduce, and analyze the text (Seidman, 1998). As previously mentioned, large amounts of data were collected throughout the series of interviews. It was my job to reduce all of that data to what was most important and of greatest interest. This process was done inductively with me reading each transcript with an open mind and striving to let the data emerge.

Sharing interview data is the third step in data analysis (Seidman, 1998). This allows the researcher to put the data in a form that can be shared with others. Seidman described two ways to share interview data: 1) develop profiles of individual participants and 2) identify thematic connections among all participants.

Seidman (1998) suggested creating a profile from interviews by using the words of the participant. Doing this allows the researcher to “present the participant in context, to clarify his or her intentions, and to convey a sense of process and time” (Seidman, p. 102). I have created a profile for each of my participants by using the transcripts from my first interviews. I wrote a narrative based on only the most compelling passages from the transcript. This profile captures the participant’s life and puts in context his or her college choice. As suggested by Seidman, I used the words of the participants and when I chose to add additional words I bracketed them. I took extra precautions to be certain that the participant’s identity was not revealed. For example, I changed the participant’s geographical location if it revealed the participant’s identity.

The second approach Seidman (1998) suggested was to identify thematic connections among all participants. I began doing this by reading the transcripts and marking and labeling interesting passages. Using a word-processing program, I filed the marked passages into a computer file that corresponded to the labels I devised for each passage. These excerpts were used in the thematic way of sharing material. In order to easily locate the source of each passage, I labeled them with the following code: initial of pseudonym, lower case letter for interview, and number indicating the page number of the interview. For example, if an excerpt came from Diana’s second interview on page 12, the label would be “Db12”.



After making the thematic connections, I needed to analyze these connections. This step involved taking the excerpts that were filed and rereading all of them file by file. I removed the less compelling ones and focused on the passages that were of most interest. I did not read the transcripts with pre-determined categories; instead, I allowed the categories to appear from the excerpts I had selected. I worked at identifying passages from a participant's experience that connects to another passage from the same participant and/or to a passage from another participant. This process of taking the excerpts from participants' interviews, finding and explaining connections among them, and building interpretive categories resulted in the themes that have been identified to represent the data.

Interpreting the material, the final step in Seidman's (1998) data analysis, requires that the interviewer take a moment to step back and reflect on the meaning he or she has made from conducting the study. This required me to examine my interviewing, transcripts, coding, profiles, categories, and themes. Seidman offered the following questions for researchers to ask themselves:

- What connective threads are there among the experiences of the participants they interviewed?
- How do they understand and explain these connections?
- What do they understand now that they did not understand before they began the interviews?
- What surprises have there been?
- What confirmation of previous instincts?
- How have their interviews been consistent with the literature?
- How inconsistent?

- How have they gone beyond? (pp. 110-111)

### Design Issues

As with any study, measures needed to be taken to ensure the study's rigor and trustworthiness. Lincoln and Guba (1985) offered four criteria to be considered when planning and conducting a qualitative research study: credibility, transferability, dependability, and confirmability.

#### *Credibility*

According to Lincoln and Guba (1985), credibility involves engaging in "activities that make it more likely that credible findings and interpretations will be produced" (p. 301). To achieve this, I employed the following techniques: 1) peer debriefing and 2) member checks.

Peer debriefing is a process of "exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the researcher's mind" (Lincoln & Guba, 1985, p. 308). A peer debriefer must play the role of "devil's advocate" to assist the researcher in possibly seeing something from a different perspective. I consulted one fellow student who is conducting her own research; yet, is very aware of my study. In addition, I was a member of a research team that met weekly to discuss various projects. I drew upon those members to serve as peer debriefers throughout the study.

Conducting a member check is the second technique I used to ensure my credibility. Lincoln and Guba (1985) suggested that this is the "most crucial technique for establishing credibility" (p. 314). During a member check, data, categories, interpretations, and conclusions are tested with participants from whom I gathered the data. Participants were

given the opportunity to provide feedback concerning the accuracy of interview transcripts and of my analysis and interpretations of the data.

### *Transferability*

Lincoln and Guba (1985) wrote that a researcher can establish transferability to the extent that “he or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility” (p. 316). Researchers create this thick description through the narratives chosen to represent the themes identified and explicitly revealing the process the researcher used in identifying those themes. By providing adequate detail, readers can determine what would be applicable for their own purposes. Therefore, my job was not to generalize my findings for a larger population, but to provide enough insight into the time and context of the study so that my audience can determine whether or not it is transferable to their situations.

### *Dependability*

Dependability refers to the consistency of findings (Lincoln & Guba, 1985). I established this through the use of an inquiry audit. This involved having an auditor examine the *process* by which my accounts were kept and the accuracy of the *products* (data, findings, interpretations, and recommendations) I completed. My major professor served as my inquiry auditor. She was responsible for making sure I had followed the appropriate process while conducting my study and accurately conducted my data collection and data analysis.

### *Confirmability*

Establishing confirmability required me to maintain an audit trail (Lincoln & Guba, 1985). In doing so, an external auditor reviewed my audit trail to determine the

trustworthiness of my study. My audit trail contains interview transcripts, field notes, methodological journal entries, and any other extraneous notes I took throughout the duration of the study. The field notes include the day-to-day activities I performed regarding the study. For example, I kept a document that tracked when and where I conducted each interview. The methodological journal entries included the reasoning I used in identifying specific categories or themes. In addition, I kept a reflexive journal as a part of my field notes. In keeping this journal I was continuously aware of my reactions and insights regarding the study. I wrote about emerging questions, surprises from the research process, frustrations and satisfactions I felt, and expectations I developed about potential findings.

#### Delimitations and Limitations

Two delimitations of this study are: 1) it only includes college choice of underrepresented students of color and 2) only engineering students are represented. The first delimitation of only including underrepresented students of color restricts readers from being able to use my results with their own situations. It drastically narrows the population. It is important to note here again that no Asian/Pacific Islanders or American Indian students were included in this study due to no students of those racial/ethnic groups attending Preview Day in 2003.

The second delimitation of this study is that it included only engineering students. Therefore, it again could limit readers from being able to apply the results to their own studies.

There were also two limitations that impacted the results of this study. First of all, this is a small qualitative study that presents potential factors to consider in college decisions; however, further research will need to be conducted to validate the findings.

The second limitation revolves around power issues that exist between the respondents and me. The students may have viewed me as in a position of power to them because I was the coordinator for the Preview Day program. In addition, power issues could have arisen because I am White and all of the respondents are students of color. I remained continuously aware of both the delimitations and the limitations as this study progressed.

## CHAPTER 4. PARTICIPANT PROFILES

Prior to discussing the findings and analysis of the data, it is important to have an understanding of the background and the lives of each of the participants. Therefore, this chapter is dedicated to offering a context in which to view each student's college choice experience. These profiles were created using the information collected during each participant's first interview and use their words to tell their story. At the end of this chapter there is a section that offers a summary of similarities and differences found among the seven participants.

### *Camila*

I have four sisters and my parents. My older sister, Tara, is about to turn 20 this month. She's at the University of Alabama right now. The next one, Martha, is 14. Then Gabriella, we call her Gabbie, is 12. And then Jackie is 9.

My father went to Northwestern and Vanderbilt. [He] is a math professor at South University. My mom is a factory worker at Webster Industries. She's worked there for a really long time. My mother went to college [at] Loyola in Chicago, but she didn't finish.

My dad's White and my mom's Black, which I think is the opposite from what it usually is. I always just say I'm mulatto. And people are like, "What's that?" So I get to explain and I'm really proud of it. And they're like, "Oh, you mean mixed." I say, "No, it's mulatto." Because a lot of people are mixed and I'm special, so I have a word for it. I don't think there really was [any problems growing up in an interracial family]. I think if there was anything I might have just overlooked it and forgotten about it. I just assume that a lot of people are ignorant and don't know what they're saying.

I don't think we did a lot as a family. We had some things that kind of intersected, but our schedules were pretty wacky. Me and most of my sisters would always dance [and] be on basketball teams at the same place. We would go to the YMCA. My parents were always busy at odd hours. I mean my father works a lot and my mom works nights.

I was born in Nashville, Tennessee, but I only lived there until I was four years old. [We] went to Italy for two years. After that, [we] went to Virginia [for] about four years. Then Virginia to the present was [in] Montgomery, Alabama. The [Montgomery] downtown area is an old, rundown, historic kind of a place. I think it's about the size of Minneapolis, but it's more of a residential place than a cities and activities kind of a place. It's really spread out. People have a tendency to not want to stay near the center of the city. That's one of those – the rich people, poor people things. So we're turning into a great big projects there in inner-city Montgomery.

I read in the newspaper it's about 50 percent White and 50 percent Black, so pretty balanced, but it kind of seems like there's just this big division. There are people who live in gated neighborhoods and go to the private schools and then there's everybody else. I wouldn't say they're rich kids and the poor kids, but they do different things. All the rich kids will go and play soccer and then the poor kids play football. I don't know why, that's the way it works.

The neighborhood I grew up in [is] a regular neighborhood. There's houses and driveways and cars and children playing in the street. I lived in more of a mixed kind of a neighborhood than other people did just being in the middle suburbia kind of thing. Then there's all the rich people who live in Win Lakes and all of the poor people who live in Capital Heights.

I guess my friends were pretty varied. I hung out with the smart kids. I think my father had a big influence on that. [He] didn't want me to hang out with the riff raff as he called them. My best friends actually, for a little while, were a Filipino girl, a Black girl, and this kind of half British, White girl. I guess when I started going to Catholic [High School], since pretty much everybody there was White, a lot of my friends were White. Then again, I kind of made friends with the different ones. At Catholic my best friends were a Goth girl, this really smart girl, and then another really smart girl who I think was the captain of the soccer team and she was a cheerleader. But everybody was White so all my friends were White. And then when everybody wasn't White, then all my friends weren't White.

I started out going to the public schools and then when I got to high school my dad wanted me to go to the school where he had gone, which was Catholic High School. I didn't want to go there. I wanted to go to a bigger school, 'cuz I don't do small schools. But it worked out, I suppose. I went to a magnet school for one year before I went to [Catholic] so I was about a year ahead in math and in science so I was with the sophomores when I was a freshman.

It was kind of weird, there were about 300 [to] 330 people at this school and maybe 15 Black kids, but that's counting me and another mulatto girl as Black kids. It was alright, I guess. There were a lot of people that were really surprised that I was Valedictorian. But I thought that was really cool; kind of a slap in the face.

My school had a pretty good math program. Mr. Franks taught Algebra; he was really cool. Then Dr. Howard, who had taught at the United States Air Force Academy or something like that; taught me Geometry and Statistics. Then I took AP Calculus with Mr. Thompson, who I did not like because he seemed to be kind of a woman hater, but not really.



Basically everyone in my class was split up into the advanced class and then the regular class. So I was always in the advanced math classes, of course, because my father [was my own personal tutor].

Our science department was actually not all that great because we kept switching teachers. I took ecology and microbiology, which was actually the class for seniors who didn't want to take physics, but I was in like 10<sup>th</sup> grade and took it. I did just fine. Physics actually was pretty good because it was the same teacher who taught my calculus classes. AP physics, too. He really pushed us.

Our English program was the best. Well, there was Myer who taught freshman English and 11<sup>th</sup> grade Brit Lit. I didn't like her very much because in 9<sup>th</sup> grade there was this assignment where we were supposed to pick a poem and interpret the poem. She was talking about this one poem by Langston Hughes, called *Cross*. It was the one that I had picked; it's about this mulatto kid. She was basically saying that the title *Cross* has a double meaning 'cuz he's a cross between his mother and his father and he's crossed because he's angry he doesn't fit into one world or the other. I was like, "That's not right; it's not cool." And she wouldn't listen to me so I didn't like her.

My 10<sup>th</sup> and 12<sup>th</sup> grade English teacher, Mr. Coover, was a good teacher. He'd gone to Ole Miss and I think he went to Harvard, too. That doesn't seem like a logical thing to go to Harvard and then to teach at a high school, but he liked it a lot. He loved us. He definitely pushed us to be spectacular, especially me.

I started out doing a lot of sports and things, like I played softball, but didn't like it. I played basketball for a little while, but I got tired of it. I think my father really wanted me to play basketball. He was convinced that I was going to get to college on a basketball

scholarship because, I guess, at that time being a girl he didn't think I could get into college for test scores or intelligence.

I danced probably since I was about three years old. Tap mostly, and then jazz and ballet. I tried to start a dance team 'cuz of my love for dance. The hardest part about that was getting a sponsor. You needed a faculty sponsor, and everybody was busy. I think we ended up just having somebody's mother sitting in 'cuz we [had] to have an adult there during the practices and well, rich, White kids have mothers who sit at home and do nothing. That's really, really bad of me to say. I'm not racist, I swear. I'm half White.

I did a lot of like summer camps and classes. And I was in girl scouts; I guess every girl does girl scouts. I was in a lot of clubs and things in high school. I was in the Spanish Club for a little while. I was the treasurer in NHS [National Honor Society]. I was in the drama club for a while.

I was probably two years old [when] I knew that I was going to go to college. I think I always just felt that it was expected of me; that's the way my family works. I think I was really lucky along with that 'cuz I know not a lot of kids get that kind of encouragement. People are always telling you elementary school's to get you ready for middle school; middle school's to get you ready for high school; and thus, high school's to get you ready for college.

My parents definitely pushed me to apply much more than I actually did apply. My big sister was really, really supportive. All my family, aunts and uncles and everybody [were supportive]. As far as pushing me, instead of the, "You have to go to college someday kind of a thing," it was a, "You better get this application done...." Like my applications for the two in-state schools, the University of Alabama and Auburn University, my father really

wanted me to apply there. I guess because he knew that I was going to get in. So he wanted there to be a sure thing for me. My mother was mostly the deadline [reminder]. I let her down a couple of times because I didn't apply to a lot of places just being lazy. My guidance counselor at school was the same thing as my mother. Just a lot of people that I knew really expected me to go to college and to do well. My older sister and I used to work at IHOP [International House of Pancakes], and there were a lot of people that I knew from there who were really proud that I was doing well in school. So I had my own support community of family and friends and ex-coworkers. Everybody seemed really supportive.

A lot of my friends from school really expected me to go to college out-of-state because I got to the point where I was getting really tired of Alabama. I just wanted to get out. My best friend and I were both going to be aerospace engineers and we both went to visit Georgia Tech together. So we did a lot of parallel considering [of] schools. [We] ended up going to different places, but we still talk.

They [her parents] were [supportive of Camila going out of state]. I mean, 'cuz my father when he went to college he had been living in Alabama and then went to Illinois. Then my mother was from Florida and went to Illinois. They were all for me just applying to wherever I wanted and wherever I thought I'd do well. Wherever they thought I'd do well, sometimes. Oh, and wherever I was offered a scholarship, of course.

I was bad and didn't visit a lot of colleges. It [my first college visit] was probably February when I came to Iowa State. I was scared about flying all the way out here [Ames, Iowa] all by myself 'cuz that wasn't something that I had done really. I had gone without parents before, but I hadn't gone completely alone, but it was alright. There were a lot of very helpful people and everything went pretty smoothly. I had fun. I was glad to be away

from school, and I made some of the best friends I have right now. I think I was kind of upset that I had to go home. Ya know, like a little kid who goes to Disney World and doesn't want to leave. It went by pretty fast, come to think of it. [I] saw the campus, met some people, thought it was really cool, and then I went home.

*Carlos*

I'm from California, [the] San Francisco area. I used to live in Singapore for a long time so I was really raised there. I live with my mom and my sister [who] is 10. My mom is a University Press Editor. She works for university presses, does regular editing stuff. My mom went to Reed College in Portland, Oregon, and she went to a[n] undergraduate only college. Then [she got her] Ph.D from Cornell University [in] French Literature.

Growing up, I actually lived with him [Dad] for many years. When I was in Singapore I lived with him, which must have been five or six years. My dad has a master's in computer science [from] UCSD [so] he's a computer scientist. A well paid one, too, apparently. I wish he'd pay for my tuition; that would be nice.

[Mom] is a Caucasian female [and dad is an] African American male. I generally would call myself just a mix, if you were to ask me to self-identify. But in terms of scholarship papers and just in general if they ask, I put Black just because I feel like it's more necessary to represent the Black community than the White community. Being an underrepresented community, it's important to show yourself as being a part of that community. I don't feel like I'm not Black definitely. My dad treated me the same way a large percentage of [the] Black community treats their kids. My dad taught me a lot of Black history. I don't tend to spend most of my time around Black people, [but] I like spending time around them and I like getting to know them, but it's not something where I feel most

comfortable with Black people. I do feel comfortable around them, just not more so than other groups. Probably because I grew up in Singapore, I feel very comfortable with Asian people. And these days, I'm starting to feel like [I'm] stuck in between. Most of the people I talk to these days are actually mulatto people.

[Singapore] probably had the most influence on me. [It] is really different than here. It was mostly dealing with Chinese people, although it's a really multiracial community and there was a lot of interaction. There wasn't much along the lines of splitting between people of different ethnicities, generally. You'd be friends with mostly Chinese since the place was 70 percent Chinese, but there was a pretty even distribution among the people there. I went to a regular public school in Singapore. I was required to take what they called a mother tongue, which you have to take Chinese, Malay, or Tamil. I took Chinese while I was there, which was really tough since most people spoke that language at home.

In Singapore, education was a really big thing. They go along the British system so you had your one major exam at the end of the year. The way they taught math [and] sciences were all really different. I guess it worked for them because you look at national rankings; they're like one or two in terms of math and science abilities.

The end of the year exams was a really high pressure thing. There wasn't a lot of cramming for exams even though it all came at the end of the year. You just went through it and you understood the material as you went. Basically, you had to know it 'cuz you're not going to pick up a whole year's worth of material at the end of a year. I wasn't top of the school or anything, [but] I did pretty good. Singapore schools were divided into classes. They were divided into 6A through E. The A class was the people with the highest grades and then the E class was the class with the lowest grades. You would be in that class for all your

subjects. For me, I actually was in the B class. I was there 2<sup>nd</sup> through 6<sup>th</sup> grade. So it was basically where I got the whole math foundation. When I came back it was weird because I remembered feeling that I'm about a year [or] two years ahead of everybody in math here.

I used to live in a pretty small community. I hung around the bike store a lot. I was really into mountain biking so every couple of weeks I'd get on my bike and I'd take like a five-hour excursion to the other side of town. Mostly just because I went really slow. There was one hill in Singapore so I figured out how to get to the one hill and I'd go biking there. That was pretty much an all day trip, but it was really fun.

[I] moved to Oregon right after sixth grade so I was going into middle school. It wasn't near the Portland area or the Salem area; it was actually next to an old folk's home because my grandmother was living there at the time. We moved right in next to it so it was kind of [an] oldish community, there weren't so many children around. It was a small, majority White community. It was strange living there because as far as I can remember I was the only minority in my school. It was good preparation for being here [Iowa State University]. I was only there for about a year and a half. The main thing I remember about being there is being introduced to football. I was doing really good in my math classes. I think I came out of the class with like 106 percent average, and I never looked at anything regarding math outside of the class.

I did 8<sup>th</sup> grade in two different schools in California. First, a public school and then a private school 'cuz I was doing really badly in a public school. Not to say that I did any better in the private school. Actually, grade wise, I think I was doing pretty good, but I just never went to class. I was silly bored. It was California, the weather was nice, and I'd rather just be out than in class. It was just stuff that I could do sleeping, backwards in my head.

In California I lived in a pretty nice suburb. My school did have gang problems occasionally. It wasn't something that was strange to any of us. It was a complete mix; I don't really know what the ethnic breakdown was. The last time I checked the census they say it's actually majority White, but I had seen all of like six White people when I was there. Just from being around school it looked like it was a majority Asian. It was a lot of Filipino people, Vietnamese people.

The thing about my school was that there was a lot of talk among student groups about trying to get the students to converse more because there was the Vietnamese students who were all in this tiny little tight knit group. The Filipino people, being a large group, were not as tight knit, but Filipino people knew each other. All Black people knew each other. The White people I think hung out, but they were in the little room somewhere that I wasn't sure where they were. Being such a mixed crowd, there were a lot of mixed people who hung out with Black people. Mostly they were Black and something else. There was me, I hung out with Filipino people mostly and some Mexicans. I knew most of the Black people, although I didn't really hang out with them, but I talked to them on a regular basis.

I actually wasn't really all that involved in high school. I tended to keep to myself for the most part. The first couple of years I didn't really do much. I had just moved in the community and so everybody knew each other since elementary school, whereas I was a complete outsider and it took me a long time to get used to the people. My junior and senior years, I ran on the track and field team; I was on the football team. Outside of school, I didn't actually talk to any of those people. I spent most of [my] time by myself. I wasn't really involved in too much stuff locally, outside of or even inside the community.

I hated my entire high school career. I went through the whole thing just looking forward to getting out of it, basically. My first year I was in all regular classes. Material was slow and boring and I complained about it a lot. Eventually that led me [to] being transferred into an honors program. They moved me into honors English, but not honors math because apparently I had come one point short on the honors math test. So I had to tolerate regular math for another year. The honors system [was] moderately more fast paced, and I guess it was a bit more of an advanced level. What it came down to really was they just made you do more work.

I was actually seeing a psychologist and he mentioned that there were programs at various high schools to send high school students to take college course[s] and they were usually linked to the local community college. I got moved into that program [and] I was the only person who was taking any advanced level classes. I was quite happy about that program actually. I got to take Calculus, Physics, English, [and] Psych courses at a college level. All of the classes that I actually went through and finished, I got As and Bs in. I was a lot happier about being in my college classes. My GPA in high school was really bad; it was like a 2.2 after my freshman year and didn't really go much past that. I graduated with a 3.0 mostly due to the college credit. In [my community] college I tried a lot harder and I worked a lot more.

I definitely felt prepared to come into college. My expectation before I had gone to Chabot was a lot harder. I thought it was going to take a lot more work. Taking those few classes in Chabot has definitely prepared me a lot more for coming into college.

In high school they give you a very specific pattern of how to learn things and people who do well in high school are obviously well adjusted to this pattern. I spent as little time as



possible adjusting to this pattern in high school so it's taken me a lot less time to adjust out of it. Doing work in a style that you do in high school just doesn't cut it here [college]; you spend too much time getting too little done. If I had actually got used to doing it in that style, I think, it probably would have retarded my ability to do anything here.

I didn't really put that much thought into it [going to college]. Most of the time it was just like it's gonna happen. I was one of those people who always felt like I was going to college. At a certain point I was feeling really bad about my education. This was right before I went to Chabot. I hated it so much and I was seriously contemplating dropping out of school [and] maybe [taking] my GED and go to college. Even when I hated my education that bad, college was kind of this light at the end of the tunnel.

She [Mom] always said you have to go to college. There's no question in her mind that I was going to college. My mom doesn't really tell me what to do, but it was one of those things where it was evident that her only expectation in this case was that I was going to go to college. I don't think she had much of a doubt that I was going to either; it was really something that never came to question.

I spent a lot of time on the Stanford campus, [but] I knew I probably wasn't even going to get in[to] Stanford. I did visit the Berkeley campus once. All my research projects that I ever did since I started at Chabot, I did in the UC-Berkeley library, which is about 100 times bigger than ISU's library; so it's massive. I had been on those campuses a lot, but they weren't places I was interested in going. Actually, they did end up being a bit of a reference point for when I came here [Iowa State].

Coming here was kind of disappointing, honestly. All the campuses I've been to have a very distinct atmosphere. Like UCSC is in the redwoods. Berkeley is on a hill and their

buildings mostly match. Stanford is completely flat, their buildings all match, and they've got the palm trees. Iowa State has a very disjointed kind of look to it. No two buildings look like they were created in the same period of time. [It was] definitely a huge culture shock being here. My impression from it was it was an okay school, I guess, and they did alright.

*Diana*

Originally I am from Ghana. I lived there up to 9 years old [and then] we moved to New Carrollton, Maryland. I lived there for two years and then moved fifteen minutes away to Greenbelt. I lived there for two or three more years [and] then we moved fifteen more minutes away to Bowie, Maryland, where I live now.

My family has six members altogether, my parents and four children including myself. I'm the oldest and right after me is my brother who is 15. My sister after my brother is 13, and my youngest sister was born here [United States] and is 6. My father is from the southern side of Ghana, near the capital area [and] is a pharmacist. [He] probably completed his bachelors and then went to pharmacy school. In Ghana, after you finish school, it's harder to get a job from the field that you've been trained. So for opportunity it made sense to come here to get established.

My mom is from the northern part of Ghana, the Muslim side. Her parents were very strict about education. They made sure they went to the best schools, and at that time it was a private, Christian school. [She] is an accountant [and] earned her bachelors degree. They both did [their studies] in Ghana.

We are very spiritual. Our family has placed an emphasis on church. I like the fact that we experienced both sides like in Ghana and now here in the United States. I'd been going to the same church for eight to nine years so that is my second family. That church was

diverse; it was mostly people from the Islands or people from Africa. So that was a relief [because I would] go to school and people would be rude and mistreat me because I couldn't really communicate with them. [It was] like a bubble for us. You can go out and do your other things and the church [would] like bring everybody back together. We were in youth groups so we did the choir and the band. We would go out on weekends and we used to have Bible study on Tuesdays.

The way that we were brought up in Ghana [was] definitely different from the way kids are brought up here, but we have learned to adjust. In Ghana, the children of course get a lot of responsibility earlier. School is definitely a blessing. Automatically you know that's just something that you work hard at. You have to take advantage of it because most kids don't have that opportunity to do what you're doing. We don't have all the luxury that you do in the United States.

In my [Ghanaian] neighborhood, our house [was] like a big compound kind of house. I don't know how it compares to any house here, but it's basically on a big land. It was not unusual for a family of about 10 to 15 living together. After dinner [since] the weather's always nice, we'd always be sitting outside just talking, telling stories all throughout the night. It's not that stressful like it is here. I mean stress isn't even talked about as much in that culture. It's a different way of life.

I think a difference between there [Ghana] and here [United States] is that there's not that "me, me" mentality. There's just a "working together for the common good" of the town. It's different here where it's like I have to look out for myself [or] my family. Everybody's kind of caught up in the American Dream, which is one of the reasons why we came here, but at the same time, having that balance is important.

Where I lived, public school systems are very sparse. It's not as good as it is here. There are mostly private schools which, of course, you pay for. It's a privilege to be able to go to a private school. Your family has to be able to fund it completely. My private school was the most important part of my education. We come in early in the morning. Everybody lines up outside, straight line with your class. They check your outfit to make sure it's like crisp and clean; not dirty. Hold out your hand; make sure your hands aren't dirty. The teachers didn't give you as much freedom in class time like you do here. It's not that there wasn't any freedom, but they have strict guidelines that they follow. They basically go at a little bit faster pace than the United States. They expected more of you at an earlier age.

When you finished high school you had to take a test that determines whether you get to go [to college] or not. They have strict cut off lines. If you get the lowest [scores], they'd [say you should do] something with your hands, like what we call vocational schools here; [doing] things that are not placed higher even though they're still important. The people at the top are generally doing the math and science, the engineering and the medicine.

When we first got here we were all excited to be in America. I was looking for like streets of gold. I didn't find it. [New Carrollton was] a quiet neighborhood, predominantly White. We were so eager to go outside and play, [but] everybody in there was like a retired White couple. I was basically stuck on my own. I ended up actually bonding with one of my aunts. I call her my aunt, but she's not my blood aunt. She was like my best friend and we still are.

When I got here, socially it definitely wasn't easy. It was very hard to talk to people 'cuz they were all speaking too fast for me. I spoke English 'cuz in Ghana the school system is taught in English, but I still had a very hard time understanding people. It was hard and I

didn't make too many friends. Ironically, it's easier for an African to communicate to a non-Black person here; I found them very disrespectful. I think that's why one of my first really close friends here was a Hispanic girl. My other close friend was a White girl.

We only lived there for a year and a half [and] then we moved to Greenbelt. That one, I think, was diverse 'cuz it was an apartment setting so there were a lot more people. There'd always be noise, like kids playing outside. I think over the years it got louder; more kids; more Blacks moved in; more Whites moved out; that seems to be the general trend in every society. That neighborhood was where I really developed myself in relation to others. I got to meet lots of people outside of the school, and that was when I had to decide what kind of person I was going to be based on the differences of opinions and upbringing.

We moved [to] Bowie, Maryland, right when I started high school. The county I live in now is not one of the better counties in Maryland. It's quieter; it's a house community, suburban. We don't have a lot of people in a close range to get interaction. I would say it's an upper-middle class Black [community]. Until a year ago, we didn't have any other families [of] any other race.

I don't really have a strong connection with Bowie even though I lived there the longest because my [high] school was in Greenbelt. That was Roosevelt and that was one of the best high schools in Maryland. You have to do like testing to get into it. We moved right when school was supposed to start, but luckily I had gotten into the Science and Tech program so they were able to provide busing and that's where I went to high school.

Every school that I've been to, I was in a program that set aside the comprehensive student and so I would find myself with other non-Black people. Being in the Science and Tech program, I was one of three or four Black kids in each class, which I didn't have a

problem with; I adjust. I'm just blessed for being in different programs, which I guess has always worked to my advantage, but at the same time it opened my eyes to those that many others weren't in those programs and weren't getting the same special treatment that I was. Like in Roosevelt, it's one of the best academic programs in Maryland. They're not like the best in everything that they do, but if you get to be in a program like Science and Tech, you have access to a lot more things.

I would have to say that I was prepared [for college]. I had very good preparation, especially from Roosevelt. My program was very rigorous. They encouraged a lot of APs. I took AP literature, US History, Physics, Chemistry, [and] Computer Science. Now that I'm here [college], we're basically doing the things we did in high school, it's just a little step up.

I don't think [attending college] was ever a question. You finish high school [and] you continue going. It would be like you have no choice but to continue to college. If you didn't, you'd be disowned. Whenever I [had] homework, she [Mom] would just drop everything. She still does that now. If [there is] anything that has to do with school, she has always put that before anything else. And that's always been very supportive.

My aunt [also] supported me. She's like one of the reasons why I am [a] strong Christian. So with anything, I would go to her about it, even down to college applications. She'd be there and be encouraging.

Church members [were supportive]. They were like, "You better go to college." If you've been to the church and you graduated, it would be a big deal and they would do something to celebrate. God [was my biggest support]. After all is said and done and you kind of separate yourself from it, my relationship with God comforted me because His will is

always what I want to do. When a school felt right, I knew He would work things out to make it happen.

Teachers [were supportive] by telling me they expected me to go to college. I can't necessarily call it supportive; they were just doing their job. Basically telling me you need this for college or if you don't do this, you're not going to be successful in college. The director of the program that I was in was definitely supportive of me because he went out of his way to make sure that everybody went to college.

Informally, the University of Maryland [was my first college visit] 'cuz it was right across the street from me. My family took a trip the summer before senior year to Massachusetts and we visited MIT and Harvard, but that sucked. We didn't go on a scheduled tour or anything like that. We basically did a self-guided tour. I didn't get a good feel for either MIT or Harvard. I couldn't see what all the hype was about for these schools. I grew up knowing that I'm going to do something with science and technology. Automatically my first choice was MIT up until the day that I visited. Harvard was too stuck up for me. Everybody had cardigans around their neck [and had] expensive shopping bags.

[My Cornell visit] was cold. That messed up certain things, but overall I really enjoyed it. I got to meet a lot of the engineering faculty [and] I stayed overnight with a host [who was] from my same county in Maryland. I think that's what made the biggest difference. Just being there and being around her; being able to connect with somebody that was from the same area. That was a good campus visit. I [also] really enjoyed Iowa State. I found myself comparing it to Cornell 'cuz those were the only two that I had actually stayed overnight and got a really good view of their programs.

*Green*

I was born in Ohio, a really small town. I moved to St. Louis when I was seven. We moved all around St. Louis and I ended up living in St. Charles, which is right outside of St. Louis. I have one sister, she's younger; she's 15. They [parents] both live with us. They own their own businesses. My mom is the owner of a cleaning service called Loving Touch Cleaning. She's gonna be getting out of that pretty soon because their other business is really starting to take off. They're part of a multi-level marketing organization so they're executives in that.

They actually went to the same college. When we lived in Ohio we were part of this Biblical Research Organization and they went to the college called The Way College at Emporia. I guess they both majored in like religious studies sort of thing. That probably wasn't the official name, but something similar to that. They met through that organization. My mom is White; she's fully White and then my dad's fully Black. I would say [I'm] Black, just because that's how I look. I'm mixed, but I mean you wouldn't be able to tell really. If I was lighter I would probably say something else.

The Biblical Research Organization, I would say, [has] had the most effect [on me]. Even though I only lived there until I was seven; that was just a really positive place. It was [an] international [organization], but it just happened to be headed in Ohio so we lived there. So from zero to seven, that's where I was raised. Then we moved to St. Louis and I guess we never lived in any bad neighborhoods. St. Louis was kind of run down. We moved a lot and I guess gradually, as we were making more money, got nicer and nicer houses. We came to St. Louis with like no money at all. Now we live in a pretty nice neighborhood.



I started playing soccer when I was in Ohio at five. I played t-ball, but I didn't like it so I quit that. I think that's all I did there. Then I moved to St. Louis and the first house we lived in was really small. We didn't really have much of a yard. I think I was just in boy scouts and soccer. I didn't stay there for that long. I actually only lived in our first house [until] 2<sup>nd</sup> grade. Then we moved to a bigger house and I lived there for 3<sup>rd</sup> and 4<sup>th</sup> grade and I got more involved. I started band and I did soccer. I guess I just got more involved as I got older. I stayed there for a year and a half and then we moved again to a condo.

St. Louis was a nice neighborhood; there were a lot of kids 'cuz I lived kind of close to the school. As far as I know, we interacted a lot. The next place I moved to was also really close to a school and that was a really nice neighborhood. We lived on a cul-de-sac so we kids would always play in the street and the neighbors were all really friendly. That was a nice place. Where I live now people keep to themselves more. We've lived there for like four or five years and we're just now starting to talk to the neighbors.

I don't remember what [the neighborhood racial diversity in] Ohio was. I don't even think I noticed. I was just young. [In] St. Louis where we first lived there were quite a few minorities. Then we moved to the next place; there were fewer. I guess it was just like fewer and fewer as we went. The neighborhood I live in now we're the only minorities pretty much.

We moved around a lot so I guess I was impacted by each place we went. As far as the individual places, I guess, the friendships that I made in each one affected me. St. Charles I liked a lot because the people there were just more, I guess, positive thinking than [in] St. Louis. People were more successful and everything. More go out and make something of themselves. That was good to surround myself with those people. That's where we live now.

The reason we moved to St. Louis was because the Biblical Research Organization needed more leadership. My dad, he's ordained and all that, so he came out to St. Louis with us to get it going out here. My dad would actually run like church services. People would come to our house, wherever we were living then, and we'd do stuff in our house. And that went on for a while. After we stopped doing that organization, we still pretty much do the same sort of thing. We don't have a set church that we go to; we just do stuff at our house.

My high school was a really good school; I think it was about 12 hundred [students]. My class was like 260 something. We had a really good math program, I think. I had a really good math teacher and I had her for junior and senior [years] for Pre-calc and Calculus. English was really good because we had an actual college professor. I guess all of the college level courses were really good because the teachers were just awesome.

Science was really weak at our high school. I definitely would have liked to be more equipped in science. The teachers weren't that good. We didn't really get pushed or anything. Math was tougher. Overall it's a good school, but [it] wasn't that hard. I never really studied and I got like a 3.8 or whatever so coming here [Iowa State University] was kind of a shock.

I was actually ahead of most kids. Freshman year I took Algebra 2. And then sophomore year I took Trig and a class called Problem Solving Strategies. Junior year I took Pre-calc and then senior year I took Calc. Freshman year I took Chemistry; sophomore year I took AP Chemistry, and then junior year I took Physics. I took nothing senior year.

I played club soccer all of my life. That was really good, a lot more competitive than high school. I did marching band, concert band, and soccer freshman year. Sophomore year I did marching band, concert band, and soccer again. I went to England to play soccer with the People to People Sports Ambassadors. That was awesome. We just toured around England

and saw all the major sites and played tournaments against their teams. Then junior year I did pep band, concert band, soccer [and] Missouri Boy's State. It's like a government leadership [workshop]. You go and start from nothing and form an entire state government with all the same positions. That was a good experience. Senior year I did no bands and soccer and track. I never did any student council or anything; I thought it was boring.

St. Charles itself is not that bad when it comes to diversity; just my little neighborhood is not diverse at all. So the school wasn't too bad. I think it was probably good compared to most. It wasn't more than 10 percent minorities, but it might have somewhere close to that. I probably hung out with more White students 'cuz that was more of just what I was involved in. Like there weren't that many minorities in band. And, not that many minorities play soccer. So just what I was involved in there was more White kids so I probably hung out with them more. But I was friends with pretty much everyone.

I don't think it [minimal racial diversity] really had any effect on me. I'm mixed so I really didn't think I like saw color for like a long time. And then when I did, it was just like whatever. So, I don't think it really had an impact on me.

For a long time I had no clue what I wanted to do. I was just all about soccer. I guess I started thinking about college like junior year. I just knew that I should be looking so I just started. We went to Seattle to visit my whole dad's side of the family. While we were there we visited the University of Washington and we talked to their coach just 'cuz I was thinking about playing soccer in college. I had no idea what I was going to major in. I was going on the tour and they were talking about the different buildings. He was like, "There's the aerospace engineering building." I always loved planes, but I never really thought about

aerospace. So I guess after I went on that trip I kind of researched aerospace engineering and got excited about it. Then I started applying to schools that had that, such as Iowa State.

I pretty much always knew I was going to [go to college]. I just didn't know where or for what. My parents gave me some input and stuff like that, but they never really went through this process because they just went to their college; they didn't have to search for one. I was their first child so they kind of were learning with me as I went.

My parents always were [supportive]. Like we didn't have the money to do it right away, but they decided you just go wherever you want and we'll figure it out. They pretty much just raised me like I can do whatever I want and go wherever. I like to plan things so they didn't really have to do too much. Once I realized what I wanted to do, I just did it. They saw what I was doing; they approved; so they were really supportive.

I always did good in school and my teachers always knew that I should go. A lot of them were references for me; my high school coach especially because he was a teacher and a coach. They would ask me where I was going to go and stuff, not if I was going to go.

I didn't really use my counselor that much. She had no input at all in where I wanted to go. She had more input on what classes I took during high school. She just kind of helped me like they do here [Iowa State University] I guess. But it was kind of loose in high school; you could pretty much take whatever. We applied to this business, which was maybe kind of a scam. They'll do all this college stuff for you. It was good because that actually got our feet moving with the college stuff 'cuz we were kind of going slow about it before. But they didn't really help that much except with FASFA. I guess they showed us how to go about the whole college process.

We [friends] talked about it [college] a lot just 'cuz we were all stressing seniors, trying to figure out what or where everyone's going, and no one knew until the last minute. There were six of us [really good friends]. Three of them stayed home and three of them went away. I went the farthest. We pretty much just all knew that we were going to go where we were going to go.

I got my letter for the Carver Scholarship and I didn't read the whole thing so I didn't even notice it at first that the money was on the second page. I got a call later asking me if I had got the letter and accepted the scholarship, and I was like, "What scholarship?" I went back and read it again and I was like, "Oh man, this is a lot of money." I wasn't really considering ISU a lot, but I was like, "They're giving me all this cash, I better check it out." So we made a visit for the next weekend. That's the first time we came up. [We] met with Tom Becker, and it was pretty much just us and him. I met with one of the soccer players about the club soccer because they didn't have varsity. Then they convinced me to do the Preview Day thing. Iowa State did it [college visits] way better than any other school.

*James*

I have three older brothers and my two parents. Mom is just pretty much a stay at home mom. She did not attend college at all. Dad works for a phone supply [company] in Dubuque. He sells and repairs normal telephones. Dad started college but ended up dropping out [at] Loras College in Dubuque. He joined the navy. My two oldest brothers came here to Iowa State. The oldest one started off going after architecture [but] wasn't able to get in. He finished with a History degree. My other brother got a degree in Metalurgy Engineering. And my other brother went to Rema Bible College down near Broken Arrow, Oklahoma. I think he just did a general degree. I mainly got interested about engineering from my older brother

who did engineering here [Iowa State University]. He's like, "Chemistry's great, but make sure you put the engineering part on there just so you make more money and get a job."

My mom's side of the family, the Howard's and the Karigan's, are among the original settlers in that area [Farley, Iowa]. My grandpa Howard was pure-bred Irish and my grandma Howard was German – Luxemburg. So my mom grew up in Farley and then after she married my dad they traveled around a little bit 'cuz dad was in the navy. They eventually moved back. Dad's side, Great-Grandpa Rodriguez was the first one to come in. My Grandpa Rodriguez would have been part Puerto Rican, part English and my Grandma Rodriguez is German – Luxemburg. I usually just go [by] Hispanic; it's easier to write down. It's just the name; I've gotten used to the fact that I have a Hispanic background in there. My great-grandfather was the one who came from Puerto Rico originally.

Farley's a small town, probably about 1,000 people all together; pretty much mostly a White farm community. The minority section of town was our house and across the street from us were some people that their dad's from El Salvador. So we're the minority section of Dubuque County really. In recent years there've been some Hispanic people who were moving into Dubuque. Otherwise it's been pretty low. I don't think it [diversity] was [addressed by the community]. You get the occasional thing where they talk about racism, but for the most part it wasn't addressed that much.

My dad was the head usher at our church so I usually help[ed] him for almost as long as I remember. In the last couple years I started [to] actually help him usher. [For] the Farley Historical Society, my mom and I were working [on] typing up obituary information. So we kind of go through, put down the name of the person, how they died, [and] when. You think

in a small town nothing interesting would ever happen, but you do get the occasional just little weird occurrence.

I had quite a few friends who usually hang out at each other's houses, play games and that kind of stuff. During the summer over in Dyersville, it's about five minutes away; they had the public municipal pool. It's also where the Field of Dreams is. There's usually something to do there or we'd drive to Dubuque.

Western Dubuque was kind of the public school for a lot of Dubuque County. They were shipping people in from all over really. Their borders pretty much bordered on with Dubuque and that's about a 20-minute drive away. It wasn't the greatest place. I guess probably the down side for a lot of high schools [is] where they put sports ahead of most other things. We often joked 'cuz a lot of the teachers were a bit from the baby boomers so were starting to retire and they weren't replacing them very quickly. So we often joked of how if our Calculus teacher retires, they wouldn't do anything to replace him; but if the football coach retired, they'd have someone new in like that. But once again, that's just kind of how it is. I had quite a few teachers who were very good; a few who weren't so good, but I think the good ones more than made up for it. I think I graduated like 9<sup>th</sup> in my class, a class of a hundred or something.

Usually it [rigor of coursework] wasn't too horrible. I guess it kind of depended on who was teaching the course. Some teachers [would] be like here's what you're going to do; sit here and endure the lecture and then you take the tests once a month. Others you have the ones where they just give you homework everyday. We had block scheduling so it would be every other [day].

Calculus was probably one of the harder ones. The structure was a little bit more difficult. I just know you'd have the daily assignment or you'd be going through the problems you have to make sure you did them right. Other ones that would be a little bit difficult were the English classes.

When I left it [the strength of math and science] was still pretty good. We still had some actually great teachers. Mr. Sam taught Social Studies, absolutely awesome teacher. And then Mrs. Sam did Basic Algebra, I think. My senior year I took Calculus; that would be how far I went in math. Cooper is our Calc teacher; [he] was pretty good.

Science was a little bit weaker. They've already been starting to lose some of their instructors, but they're still pretty good. For sciences, it was Biology, Chemistry, and Physics. Physics was a pretty good course. The problem was that the physics instructor had retired so they sent a new guy in there. So as he put it, "We're learning from him and he's learning from us," 'cuz it was his first year teaching Physics.

Some [classes] more so than others [prepared me for college]. Like I said, my instructor to Calculus made things hard so it was great training for college. My senior year of English was a great lesson for writing a term paper 'cuz it reminded me that you need to put citations in it, which is [a] really useful thing to know coming in here [Iowa State University]. I think those would probably be kind of the two main ones that helped me get ready for college.

We had some courses they offered college credit for. I never took any of the science courses for college credit. I did do [an] English course and then Calculus, Pre-Calc, and my Algebra/Trig class. Most of the college credit courses went through NICC, which is the community college nearby. My Algebra 2/Trig course I took in the summer before my junior



year. I wanted to jump ahead so I could do Pre-calc the following year and then take Calculus my senior year. It was actually kind of a fun experience.

For high school I was always involved with doing music, play[ing] in the band. [I] did seven years in percussion. My last few years of high school I got involved in speech; did a lot of acting in various forms. I was in National Honor Society. No [I didn't play sports], I'm a geek. What can I say? I have the athletic skills of a rock.

Since my brothers were going to college, I guess I'd always just planned on someday I'm going to go to college. I'd say it would be my brothers [who introduced me to college]. Since I had my two oldest brothers that came here to Iowa State, I was always reminded that I'm going to go to Iowa State. It's kind of the big image; the glory of Iowa State.

My parents were always very supportive [of me going to college]; helping me out, getting stuff mailed out. Some of my teachers were just a lot of help, always checking on us. This is probably one of the main reasons it's a good thing to have great relationships with your teachers.

I don't know if I had anyone else who was particularly helpful in urging. I know that some of my family members just were overjoyed when I got accepted here [Iowa State University] and then also when I got some of the scholarships. When my oldest brother went to college, he [Grandpa Rodriguez] was kind of angry in a way because he was like "What is this? Do you think you're better than all of us when you're going to college?" When he got out of school, he just went and worked at the Dubuque packing house, one of the local factories, and he thought that everybody could go out and work at the pack or work at John Deere. But I think by the time I came, my oldest brother kind of made him rethink it. Especially after my oldest brother got out of college and instantly had a better salary than my

grandpa ever had. That really changed his mind. I'm just glad that I've heard that he was proud of me.

We have a guidance office, but our guidance office at our high school has never really been the most effective place. Pretty much if you want something done, you went to the secretary in the guidance office 'cuz if she hadn't been there, that place would have fallen apart. She was actually quite good, too. So you could go in and just say, "Hey, are there any new scholarships?" They had this little shelving unit where they had various scholarships. [She'd] say, "Okay, and this should work for you, this one, this one, this one, this one. You might be able to get this one here, this one."

I think my friends used to support each other. We all ended up pretty much going to different places. One of them [my closest friends] was originally planning to go to the University of Wisconsin up in Platteville. Then he joined the Army Engineers and they had told him that he was still going to do classes, but he ended up in Iraq. Another one of my friends was planning to go to NICC, but he also signed up for the National Guard. He's in Afghanistan now. My other friends pretty much just helped each other out. If we had scholarship essays we'd be proofreader[s] for each other. Tell about where we're going; bounce ideas off back and forth. A few of them were heading to community colleges. [A] friend went to Kirkwood where he's going for right now, but he's applying to either here or UNI and so he's eventually going to try for an architecture degree after he gets done there. The rest just headed out to actual universities for the most part.

They [his brothers] were the ones that were always like "Hey, have you applied yet?" They'd be like, "Have you gotten your application in for classes or to get into the college?"

And then when that was done, it was like, “Have you gotten the housing application in? You need to hurry up so you get good housing. Otherwise you’re going to end up in Towers.”

When my oldest brother was here [Iowa State University], we visited the dorms every once in a while for various things. We helped him move in and out, back and forth. That would have probably been my first [college] visit [at age] four or five. Maybe in 8<sup>th</sup> grade I made one of my first [official visits for] one of the various outreach things that Iowa State has put on. Once I got into my senior year of high school that’s when I did a lot of the like, Preview Day [and] Breakfast with the Dean. Preview Day, honestly, was the best one. They answer your question[s]; showed the campus [and] what life was like, the dorms and everything. My first choice had been Iowa State. So when I sent my application in and I was accepted, [there was] no reason to check out anywhere else.

*Michael*

I was born in Columbus, Nebraska, and I stayed there about three months so I don’t really feel raised there. [I was raised in] Kimball, Nebraska. It’s about 25 hundred people. My dad is a supervisor at a tool and dye shop. He also goes by like ‘mold maker’. He makes molds for plastic parts. My dad did [go to college]. I don’t know what in, but he got it at Southeast Community College in Milford, Nebraska. [Mom is] a hospice nurse. She got a CNA, so she went through a CNA training program, but that’s as far as she went. They grew up in the same community and met in high school. My dad is full Mexican [and Mom] is Caucasian so I’m half-Mexican. I tend to go by Hispanic.

[I have] an older sister; she’s still in college. She’s going into nursing [at] Weber State University in Utah. She originally went to Abilene Christian University in Texas for a year and a half and then transferred to Utah when her husband got out of the air force.

I have the type of personality where I just jump into anything head first. I've always kind of taken every experience I could get. It really kind of shows there was a difference between me and my sister. My senior year I was making trips to Tennessee; I was going to Utah [and] South Dakota; not being afraid of any situation. I don't really know where [I] started to form the independence, but I think it might have just been kind of the male thing to do where I just would go off and do my own thing.

[Kimball is] a really small, rural Nebraska community. My graduating class was only 51 people. There wasn't much racial diversity. We had maybe a couple of Black people in our high school and maybe a few Hispanics, but it was mostly White. I'd probably say like 90 to 95 percent White; pretty rural Nebraska.

It's actually kind of been a big difference coming from a small community [to] the big college town. I knew everybody in the town; everybody knows everybody. There was a sense of a community. You knew that if you were stuck on the side of the road, you'd have 10 people ask you if you need a ride. I was involved with the church a lot. I had a catechism program and then eventually grew up to teach the catechism program to younger children. I taught 2<sup>nd</sup> graders and it was a really powerful experience. I didn't really do anything else other than that in the community.

I met all my friends because they lived on my street. I had about a group of seven of my guy friends that I would hang out with constantly. When we were younger, we'd play football together in each other's yards or whatever seasonal sport it was. Ride bikes around; play games at night like hide-and-go-seek and stuff like that. Then when we got older we would just kind of hang out at the mini-mart. That was our thing to do. It started out we would meet at the mini-mart and then go do something. It started to become that being at the

min-mart was the thing to do. We had the opportunity that if we needed to get out of the small town we could go pretty easily to the big town or big city [because] it's right close to Cheyenne, Wyoming and Denver, Colorado.

There was me and another friend that was Hispanic and then the rest of them were Caucasian. It [diversity] was mostly joked about in our group of friends. It was never really like serious prejudice. I did experience [prejudice] mostly [from] older people. I dated a few girls that when I would go to their family functions, they would tell me on the way there, "My grandma's been kind of raised differently and she doesn't really like Mexican people." I was like, "Okay, thanks for telling me on the way there." But I always kind of made it my business to change their views a little bit [by] just trying to make a positive impression and change their schema of what they thought a Mexican person was like. A lot of them never really showed direct prejudice right off the bat. It was maybe a little uncomfortable, but they would never say anything to my face that was racial or anything like that.

In my school, I was a geek. We [classmates] weren't as good in sports so we started kind of focusing on what we really were good at – academics. I think I had an exceptional class when it came to scholastics. Starting in junior high, we would win quiz bowl competitions. It almost became cool to be good in school. It was really competitive for getting good grades. Practically, if you didn't have straight A's, you were one of the dumb kids. So then everybody constantly tries to be up there with the cool crowd and does good in school. It really showed because our class really didn't have the jock mentality. We were unique for our own town even.

I went through some pretty good teachers, I think. I had the same teacher teach everything from Biology to Chemistry to Advanced Biology, Chemistry, Glass-blowing,

Photography, Psychology. He was excellent at all of them. He was almost like a college professor in the way he would teach. He really doesn't try to keep it at a high school level; he tries to push you above your high school level and so I really kind of enjoyed that.

When it comes to my math teacher, I'd always been good at math and involved in like the Math Counts program in junior high. So I got involved with her [the math teacher] starting 8<sup>th</sup> grade year because she helped with the Math Counts program [and] I had [her] all four years of [high] school. You kind of get to know them and get used to their teaching style so that kind of helped. [I] didn't really have to do much homework or much studying when it came to [Math] tests. She actually was one of the teachers that would scold me if I wasn't doing up to my potential. It was tough love. She was the one that would challenge me.

If you wanted to get the math and science background, you could. You didn't have to take like the Calculus and the Pre-calculus, but if you did, you definitely have a great math and science background. It felt kind of natural to me. Like it was almost like I put myself in that position a long time ago when I started liking math and science. Those [classes] were probably the only two courses I did homework in [during] high school.

My English teacher was really good. He actually started a Shakespeare program and I got involved with that and I loved it. It was actually a Shakespearian performance. Every year we had a Shakespeare festival where we had two scenes that we would perform. I was actually involved in that program for two years and then ended up doing drama the year after.

I think I was pretty well prepared [for college] from a high school perspective. I felt like the math and science courses kind of prepared me. But I almost feel kind of cheated because I grew up in a small town and we didn't get offered AP courses. We took AP courses, practically, because I took the Calculus and I know I could have probably passed out

of Calc 1 if I took the AP course. I could have done the Psychology. I could have done Chemistry and Biology, too. I took a Physics class, too, so I could have maybe gotten AP Physics. I feel kind of gypped. So that's the one downfall of living in a small community.

I was on the student council in junior high. I was vice president [of our class] freshman and sophomore year. Then I was president of my class for junior [and senior] year. I liked it especially junior and senior year because you get involved with planning of prom and other activities. I was in every type of band and chorus you could be into. I did pep band, jazz band, concert band, and then I did choir, [and] show choir. We had district music contests where I'd do different octets and men's ensembles and stuff like that. I played the drums. Actually I did some of that in show choir, too; I alternated years. Freshman year I played the drums; sophomore year I sang; junior year I played the drums; and senior year I sang. I did cross country [and] basketball for three years. And then I just did track my senior year. It was actually kind of just something that I did on the side. We never really played to win, except for track. I just think that I did a lot of stuff that I couldn't have done all together if it wasn't for the small community. A lot of communities you do one or the other. I felt that was kind of cool that I could expand and do all of them; give them all a shot.

I really can't think of a time when I didn't think that I was going to college. It's the natural thing to do nowadays because you almost can't get along without a college education, or you get along better with a college education than you would without one. My parents were a lot about getting into college [and] doing well partially because they didn't do the full college thing. They did a little bit of college and they kind of want better for their kids. If one of the kids in my class said they weren't going to go to college or do something in the armed services, they would seem like an outcast...like a minority.

It was mostly my immediate family that made the biggest impact on that [going to college]. A lot of support [came from] my mom and my dad. There was never a time when they would even let me think about not going to college. Mostly it was just talk about your potential and stuff like that, not wanting to waste your potential. I had a lot [of support] from the older sister, too, because she had done the whole college thing and she kind of led by example. I was kind of the competitive type so when she did her ACT; I wanted to do better. When she got all this college mail; I wanted to get more.

I didn't really get support from my friends or anything like that because it was almost like a mutual support. We pretty much all knew we were going. We eventually started talking about where we were going. The science teacher was definitely all about getting into college and doing well in college. He would always lecture us about how you're going to have to study real hard to get by in college, and how a lot of you won't even get your degree even though you go to college.

We had a fairly good counselor, but he was mostly like a college bound counselor. He would help you get scholarships and talk to you about college. So he offered a lot of support come junior, senior year. Actually, even back into sophomore [year] when he encouraged you to take practice tests to start on your way to get to college. He was actually really involved and would get you on the phone with people from different college[s], and let you talk to them and see what they could do.

The first time going to a college campus was through my sister going to colleges and visiting. The first time actually going to a college campus was Iowa State [for Preview Day]. I learned a lot about college and where I wanted to go from being there. It was actually a really good experience. You get a closer view than just seeing it from the outside. And you're



around other students that are potentially going there. When you know what something is like, you can maybe know whether or not you're going to like it. You get a sense of what the environment'll be like when you are down there, what kind of people you are going to be around, [and the] different changes that you're going to be going through. It seemed really welcoming. I was kind of taken aback by how open and nice everybody was there. It was never a really high pressure situation. It definitely was a good experience.

*Shirley*

I was primarily raised in Pittsburg, California. I was born in Reno and I lived there until I was four, but I guess I don't really remember any of that. My immediate family is just me and my mom. She works with computers. Her title is Storage Administrator and she works with main frame computers, like virtual storage. No [she didn't attend college]. I mean, she did a couple of credits [at] the University of Reno – Nevada, but she never graduated. He [dad] died before I was born. My mom is White and my dad was Black; I identify as mixed. If I have to put only one box in something like school, I usually put African American. If they have like a mulatto box then I put that. But they don't usually. I don't feel like I really learned that much about it [Black culture] at all, but I've never really had that many Black friends. I definitely would characterize my knowledge as being very low.

I lived with my grandparents for a while until I was like a teenager. My grandma is from Canada. She's still a Canadian citizen and my grandpa is originally from Oregon. My grandpa has done a couple different jobs, but the one that I remember most prevalently was he was a private investigator. And then my grandma worked in finance, payroll or something like that. My grandpa had to move around because he was in the military so the family

moved around. They were stationed in Lake Tahoe. My mom was planning on staying, but she followed them [to California].

[Pittsburg's] around 50, 60 thousand people. It's definitely a very diverse community. Everyone comments when they come in [that] it's a pretty even mix of African American people, White people, Asian people, and Hispanic people. They kind of stay separate in like their own [groups]. I felt like I knew a lot of people in the town even though with 60 thousand people, you couldn't really know everybody.

I lived in like three different parts of Pittsburg. I was in elementary when I was at my grandparents [at] the first neighborhood; [it] was mostly like White people, I guess, looking back. I don't know if that was like a perfect assessment, but yeah. And then we [neighborhood kids] would play like sports stuff like basketball if somebody had a basketball hoop or something.

Then I moved with my mom to another area of Pittsburg [during] junior high [and] a little bit of high school, which was still fairly nice. I still played with the neighborhood children. They were a different kind of children, I guess. I can't really characterize the neighborhood; I can only really characterize the people I hung out with in that neighborhood. I hung out with mostly like African American people, but I can't tell you about the whole neighborhood. It was primarily minorities and not just African American. Also, I had Hispanic friends and stuff, too, and we'd also do sports stuff like football [and] basketball; play video games, too.

The rent got to be too expensive so we moved after I was 16 to this bad area of Pittsburgh. That was the neighborhood with mostly minorities, overwhelmingly so. On my block my mom was really like the only White person. The people actually were nice. We

were in a bad area; there was obviously the people who were doing the bad things like selling drugs and stuff, but if you kept to yourself then it wasn't that big of a deal. I definitely wasn't going to get involved in any of that stuff. I was already a sophomore in high school. I already had a place and everything at school doing my thing.

I never really noticed it [the racial diversity of the community]. I didn't really look at it that way at the time. It was just harder trying to make friends. It wasn't like, "Oh, now I have to like relate to different types of people." I didn't think about it like that.

My family always stressed school. I think that had a large part to do [with] why I was so smart and involved in school 'cuz my mom used to play like educational games [with me]. And then she'd volunteer at my school [and] went to those [school functions] so it was just like school was a big deal.

In junior high school it seemed to me that there was this divide in the school. If you got into honors Algebra then you started doing Algebra early. You kind of went on this one track and that was all the smart kids. From then on I had a lot of math and science course[s]. But if you didn't, you kind of got left behind. So I've always taken as much math and science courses that my school offered and went to community college to supplement that. I thought I was prepared and everything 'til I came here [MIT]. But definitely I'm even more prepared than some of the people here. The fact that I went to the community college and took upper level math courses made me such that I had taken more than a lot of the people. In terms of MIT rigorous, [the classes were] not rigorous at all. I think that I was prepared though.

I would say [the quality of my high school education was] between weak and fairly good. They could definitely be a lot better, but I couldn't know what it was like to go to like private school and get all that other stuff. It wasn't terrible. My high school was 25 hundred

[students]. It didn't feel like that to me 'cuz I was kind of in a different track, the AP track, so your classes are always smaller. You kind of have your own separate community, I guess.

Freshman year I was like the most involved of the other years. I did three sports: volleyball, soccer, and track. I had four or five clubs I was in. I was in key club, which is a community service club. That kind of narrowed off to senior year, I did no sports and one or two clubs. So in the middle I filled in a couple of sports and a couple of clubs a year. [The] main clubs that I stayed in were California Scholarship Federation [and] Club Power, which is [an] environmental club. Club Power was the one that I did the most community service in. Almost every Saturday we'd be going to someplace [local power plants] to restore it and then during the week all clubs just meet at lunch and talk about club stuff. The other clubs were not as active; just once in a while you'd have some event that you'd have to do stuff for, but not really.

I guess the interaction that I had with teachers was pretty good because of the fact that I was a smart kid. Most all my teachers knew me. I felt comfortable asking questions and stuff that enhanced my experience and made it so that I understood the stuff more. The relationship with the teachers was a big help. There were a lot of minority teachers, too, I guess, but it was mostly White. I didn't really think of it that way.

I took Calculus I, Calculus II, Calculus III, and Physics. So I took four classes there [community college]. My high school had AP Physics B, which is not with Calculus, but the community college had basically the equivalent with like Calculus applications. That definitely prepared me more for college 'cuz college is more like Calculus based Physics, which is why I took it. I was trying to organize it by like Caltech [requirements]. I primarily found out from college applications [that] Calculus-based physics [was] strongly

recommended. I had a high school college counselor; she was a really nice person and I liked her a lot, but I mostly found out my college information on my own. My mom stressed education, but she didn't know any of the specifics of that stuff so I guess I just really found it on my own.

My mom was always like, "It was just a given, after you graduate you're going to college." She never talked about why specifically; I think it could have to do with the fact that nobody in my family had gone to college. They all never really had that great of job[s]. She grew up like really poor and I think she's always regretted not going to college. You have to have a good education so it was just like I never thought of my life in terms of anything else. So when I got to the age of being able to think about it, it just seemed like the wisest choice. That was just something that people did after high school so it was a part of what my reality was gonna be.

They [my whole family] all supported the fact that I [was going to college]. Primarily my mom showed her support; she volunteered at my school. It wasn't necessarily like a lot of her stuff was focused on college, but the things that she supported me with were like in elementary she volunteered a lot. [In] high school she'd volunteer for stuff. It's not like she would really help me out; she wouldn't like help me with my homework. [She paid] for my application fee[s and] supported me my whole life. I never worked so all the money aspect came from her and she would support me by mailing everything and by reading over my essays.

They [grandparents were] aware of everything that was going on in my life. That was one of the ways that they were supportive. The rest of my family on my mom's side [was] basically the same thing like my grandparents, but less so 'cuz they weren't here, but

everybody knew what was going on and would be asking me. My mom's friends, too, [supported me]. They also knew everything that was going on. One of my mom's friends bought me a laptop for when I was going to college.

I guess the people at my school, too, [were supportive]. Like my counselor supported me by whatever colleges you got into like they would announce them over like the loud speaker at school. When I told her I got into MIT, she almost fainted. So she was supportive [because] she would know about what was going on and be happy when good things happen. My friends and also my teachers [were] the same. Some of them [teachers] wrote recommendation letters. People just knew what was going on in my life. If you asked me if those people supported me, I would say yes. It just seemed obvious to me that they were supporting me.

I think the first college that I visited because I was in high school and I was thinking of going to that college was Cal Poly, and that was just like four hours away from me. I was like a junior in high school. We went on a tour and stayed over night. I thought it was the greatest place in the world. I was just like enthralled by the whole concept, like everything was just great. I didn't look at like anything discerning about it. I wouldn't be like, "Hmm, big class sizes." I would just be like, "Wow, I get to sit next to a lot of people." I would make everything positive about it. I was just excited.

In retrospect, I realize all the mistakes that I made and things that I would have done differently as far as college application. One of the things would be just to see more 'cuz I feel like I didn't look. I looked at probably around eight or so [and] eight is not really that much. It depends on how you narrowed it down to the eight [but] if you're just eight random colleges, there's just so much more to see.

## Summary

After speaking with the students and organizing their profiles, I thought it would be helpful to summarize what I found among the seven participants. I address the following areas: multiracial families, educated families, college expectations, support, and educational preparation.

One of the most surprising facts to me was that six out of my seven participants originate from multiracial families. What was even more interesting was how each of them self-identified. Camila identified as mulatto, Carlos as mixed, Green as Black, James as Hispanic; Michael as Hispanic, and Shirley as African American or mulatto. The reasons behind how they self-identified varied as well. For example, Camila identified as mulatto because she's really proud of it. She said, "A lot of people are mixed and I'm special." Green's explanation was, "I would say [I'm] Black, just because that's how I look.... If I was lighter I would probably say something else." Lastly, James' reasoning included, "I usually go [by] Hispanic; it's easier to write down." My interpretation of these reasons is that many of the students do not have strong racial/ethnic identities. Quite possibly, if Camila understood the origins of the term "mulatto," she might not so readily identify as one. In addition, if James felt a stronger connection with his Hispanic heritage, he may be proud to identify as Hispanic rather than just identifying that way because it is easier.

In addition to coming from multiracial families, my participants also talked about originating from educated families. Two students, Camila and Carlos, each have one parent who has earned a Ph.D. Diana's father is a pharmacist. Green and Michael have parents who have earned at least a post-secondary degree. Finally, while James and Shirley did not have parents who earned a college degree, each of them talked about one of their parents having

attended college at some point. James did mention that his three brothers, who are considerably older than him, all earned college degrees. All of these students, then, came from families who were familiar with post-secondary options, with most of their parents and/or siblings having attended college.

After asking each of my participants when they knew they were going to attend college, I heard similar responses from all of them; they each had pretty much always known they were going on for a higher education degree. Camila commented:

I was probably two years old [when] I knew that I was going to go to college. I think I always just felt that it was expected of me.... People are always telling you elementary school's to get you ready for middle school; middle school's to get you ready for high school; and thus, high school's to get you ready for college.

Diana explained, "I don't think [attending college] was ever a question. You finish high school [and] you continue going." Michael said, "I really can't think of a time when I didn't think that I was going to college. It's the natural thing to do nowadays because you almost can't get along without a college education." Even Shirley, who came from a less educated family, talked about going to college because it was the "wisest choice." She said, "That was just something that people did after high school so it was a part of what my reality was gonna be."

The students were also similar with regard to the level of support or encouragement they received from those around them to attend college. All of the students mentioned receiving support from at least one person, and none of the students could remember a situation where somebody was being non-supportive of their pursuit for higher education. While Carlos talked about not receiving a tremendous amount of support, he still felt the



encouragement coming from his mother. He explained, “She [Mom] always said you have to go to college. There’s no question in her mind that I was going to college.” Diana, on the other hand, talked about the numerous places from which she was receiving support: parents, extended family members, teachers, church members, and most importantly God.

Finally, the educational preparation these students received was strong. Each one of my participants felt adequately prepared for college. Many of the students, for example, Camila and Green, talked about the excellent preparation they received by taking Advanced Placement courses. In addition, Carlos, James, and Shirley supplemented their high school education by enrolling in local community college classes. In Diana’s case, she was accepted into a Science and Tech program at her high school so she felt very prepared for college.

In examining these students’ backgrounds based on the previous five areas: multiracial families, educated families, college expectations, support, and educational preparation, it becomes apparent that these students have had atypical life and educational experiences that most people would not assume students of color would experience. Therefore, when interpreting the findings, which will be discussed in the next chapter, it is essential to remember that the participants in this study consisted of students who are from educated, middle-class, multiracial families who appear to have life experiences unlike many other racial/ethnic minority students. Following the analysis, the conclusions, implications, and recommendations are addressed.

## CHAPTER 5. ANALYSIS

To this point, an understanding of this study has been established by explaining the background of the study, providing a literature review, sharing the methodology and methods employed, and providing detailed narratives of my participants. All of this information combined offers a context in which to place the analysis of this study, which is now offered. My analysis of the in-depth interviews conducted with the seven participants resulted in four themes: College Choice Process: Universal yet Idiosyncratic; Making and Maintaining a Connection; College Choice: A Pragmatic, Independent Decision; and To Study AND To Play. Each theme is addressed below with statements from the participants included to support the theme. I also compare my findings to those of previous researchers.

### College Choice Process: Universal yet Idiosyncratic

While conducting my second interviews with my participants, I explored the process they identified going through when making their college choice. All of the participants are high-achieving students of color who chose to major in engineering so I wanted to learn if all of them had a similar process or if they had unique experiences. After studying the transcripts from my second interviews, I found that the students all talked about similar components to their college selection process; however, the ways in which they journeyed through this decision were quite different. I will begin by sharing how their processes were universal and end by pointing out the idiosyncratic nature of the college choice process for these students.

The seven participants in this study recognized a process that included taking national tests, sifting through the promotional materials from various colleges; perusing the Internet to explore the websites of the institutions they were beginning to think about; conducting college visit(s); applying to schools; and eventually making their final choice. Together,

these six steps the students discussed appear to reflect the process identified by Gilmour, Spiro, and Dolich (1981) and Hossler and Gallagher (1987). In the beginning of Chapter 2, these researchers' models were summarized as having similar components, which included: a decision to attend or not attend college, the search process, and the final decision. The students who participated in this study recognized and talked about traveling through the last two steps; however, none of them remembered making a conscious decision to attend college, the first step identified by Gilmour, et al. and Hossler and Gallagher. In fact, many of them recalled always knowing that college was the next step after high school. In the following dialogue from my first interview with Shirley, it is apparent that she never really made a conscious decision to attend college.

Researcher: When did you realize that you were going to attend college?

Shirley: Well, ever since I can remember. It wasn't even really a choice. I mean, I thought it was because I was a little kid, but my mom was always like it was just a given, "After you graduate you're going to college." So it was just like I never thought of my life in terms of anything else. And so then when I got to the age of being able to think about it, it just seemed like the wisest choice.

Camila and Diana had similar responses. During my first interview with Camila she recalled, "I was probably two years old. I pretty much just always knew that I was going to go to college. I think I always just felt that it was expected of me." In a dialogue I had with Diana about when she knew she was going to college, she responded with the following:

Researcher: Can you talk a little bit about when you realized that you were going to attend college? How old were you?

Diana: Two.

Researcher: Two?

Diana: I don't think it was ever a question...sadly. Or I don't know if that's sad, but yeah, I didn't, you finish high school, you continue going.

Green and Michael had always known, as well, that they would be attending college. Green stated, "I guess I pretty much always knew I was going to. I just didn't know where or for what. I guess I just always planned on it." Michael made the comment, "Well, I really can't think of a time when I didn't think that I was going to college so probably ever since I got into school."

These students' remarks contradict the results found by Gilmour, et al. (1981) and Hossler and Gallagher's (1987) model, both of which state that the first stage in the college selection process includes making the initial decision to attend college. For the students who participated in this study, the decision seems to have been made long before; hence, the students appear to have skipped this first step, going directly into their search phase. Not going through the first stage proposed by Gilmour et al. and Hossler and Gallagher has been found to happen for high-ability students. Bradshaw, Espinoza, and Hausman (2001) reported that high-achieving students felt they never had the option not to attend college. In fact, the students "did not consider it a decision, but rather something they always knew they would do" (p. 20). The findings of Bradshaw, et al. are supported by the comments of the students who participated in the current study.

After discussing when the students knew they were going to college, I asked them to recall their college selection process. I requested they try to do it in chronological order, as it might be easier for them to remember and for me to follow. In response, my participants generally began by talking about when they started taking national standardized tests, such as

the PSATs, ACTs, and SATs. For most of them this started during their sophomore or junior year in high school. Carlos recalled taking the PSATs and SATs. He said, "I took the PSAT my sophomore and junior year.... I took the SAT two or three times, I think twice my junior year and I might have taken it again my senior year." Camila actually took both the ACT and SAT. She said, "I took that [PSAT] my junior year, and then I took the first SAT or ACT the summer before my senior year.... I took my ACT and my SAT twice each." Green only took the ACT. He said, "I took [the ACT] first semester junior year and one second semester." Shirley recalled, "I took that [PSAT] sophomore year and junior year....Then senior year I took the SATs. First one was in like the beginning of senior year and then I ended up taking it again."

Each student recognized that taking one of these national tests was an important part of their college choice process. Camila talked about how performing well on these tests can qualify you for National Achievement or National Merit status, thus affecting the financial aid offers schools would award you. Although each of the students acknowledged this importance, no previous researchers included it in their process. In fact, Gilmour, Spiro, and Dolich (1981) immediately went from the step of making the college attendance decision to Developing a College List, thus missing this integral step in the college selection. In addition, Hossler and Gallagher (1987) went directly from Predisposition to Search and did not address the act of taking national tests.

After taking these tests, the participants remembered receiving large amounts of mail from numerous colleges and universities. It was from these mailings that the students began compiling a list of colleges to which they would possibly apply. James remembered getting letters and filtering through them. "I kind of started getting letters and signed up to various

colleges. After that, I started sifting through the letters seeing, ‘Okay, does this place look good? Do they have what I want?’ A lot of them ended up in the garbage.” Camila talked about how useful the letters were to her, “The letters and things that they sent were actually helpful because they were more specific and geared towards me.” Carlos recalled receiving large amounts of mail. He said, “The stack of letters that were in the corner of my room were about a mile high. I guess everybody was trying to get my attention and send me some things that would get their name in my head.” Diana specifically remembered, “So after that [taking her PSAT], I started receiving a lot of letters and mailings. That was the first step. That’s when I compiled all those different colleges.”

Often times after my participants would receive a letter in the mail they would connect to the Internet and search what that specific college or university was about. Michael recalled using the Internet to take on-line tours. He said, “I really checked it out on the Internet and tried to take on-line tours and stuff like that.” Another big user of the Internet was Carlos. He talked about his use of it, “Anytime I was interested in any school or anything like that I would usually look them up mostly just looking through their website.”

At some point during their high school careers, all seven of the participants conducted at least one college visit, if not more. For example, Camila visited Georgia Tech and Iowa State University. Carlos, James, and Michael all formally visited Iowa State University, but Carlos also spent time on the campuses of Berkeley and Stanford, while Michael explored the University of Nebraska – Lincoln on his own. Diana organized college visits with Cornell University and Iowa State University and informally visited Harvard and MIT. Green visited University of Washington, University of Missouri – Rolla, and Iowa State University.

Finally, Shirley attended MIT, Iowa State University, UC Davis, and UC Berkeley for college visits.

The three steps my participants identified - sifting through promotional materials, conducting searches on the Internet, and attending college visits - appear to relate well to the research that has been conducted previously. For example, Developing a College List is the second step Gilmour, et al. (1981) found students to experience. As Diana mentioned, receiving the mailings from various schools helped her to create a list of potential college options. In addition, by searching the Internet and going on campus visits, these students were able to add or subtract schools from their list of places to consider. In terms of Hossler and Gallagher's (1987) model, these steps described by the students would relate to the second phase, Search, specifically addressing both the search activities colleges and universities are using to locate prospective students and the search activities students are using in order to form a choice set.

The fifth step the students talked about was completing admissions applications during their senior year; however, many of them utilized different time frames. During my second interview with Camila, she recalled sending in four applications: "[I] completed and sent them in right before the deadlines, each and every single one of them." Carlos's application process was similar, "Yeah, my senior year, the end of the last numerical year, was when I was finishing up the applications and things. I actually waited 'til like the last day to finish up my applications." Shirley, too, applied close to the deadlines. She said, "So I applied around December, January-ish depending on the application deadline." Diana and Michael, on the other hand, attempted to work ahead. Diana recalled, "Then senior year I really got down to it because I was thinking about applying early to most of my schools. I

tried to finish my applications by November so I had to decide a lot of things really quick.” Michael said, “That [completing applications] was probably the end of my junior year to the beginning of my senior year and I was just trying to get started early on some of the applications.”

The final step in the college choice process these students identified was making their college choice. Several of the students were undecided right up until the May 1 deadline. Shirley talked about her final decision being between UC Davis, MIT, and Iowa State University. She said, “I accepted MIT around, I don’t even now, before May 1 - ’cuz that’s the deadline.” Michael talked about how difficult it was to make his final choice. “Umm, the final decision was actually, uh, it took me a really long time to come to my final decision, especially between Iowa State and Arizona State.... It was kind of a toss up for a while, and then I just, uh, probably April was when I decided I was going to go to Arizona State.” James, on the other hand, knew immediately where he was going to attend after being accepted to Iowa State. He said, “So I sent in the application, got accepted, and I’m like, ‘Okay, that’s good enough, I’m done.’”

These final two steps the students identified again appear to relate to the previous research. Gilmour, et al. (1981) had two separate steps called Application and College Choice. Hossler and Gallagher (1987) combined them into their last phase called Choice.

As is highlighted in the students’ statements, one can see how the college selection process appears to have been similar for each of the seven participants. However, even though the students recognized going through similar steps in making their college choice, it appears as though the way in which they did it varied greatly. One could look at it on a continuum from very systematic, organized, and thorough to very unsystematic, disheveled,



and limited. For example, during my second interview with Carlos, he described his process as being on the systematic side. He recalled:

It was a very iterative process. That's a big buzz word for aerospace engineers these days. Everything is an iterative process. I didn't use it back then, but it was a very iterative process where I'd go through and I'd pick a bunch of schools based on some requirement and then later I'd think of something else that I wanted out of a school and I'd go back through my original list and get rid of several schools and maybe add a few more because of this new requirement. And basically I went through and refined the list over and over again so many times. It actually went on through the course of several months, which was something I was really proud of.... I eventually applied to four schools that were in four different states and spread way out. They were schools that I specifically wanted to go.

On the other side of the spectrum, James had a completely different experience with his college selection process. During my third interview with him he shared with me how his process went: "My process was pretty simple and straight forward. It was like, 'Okay, will they [Iowa State University] accept me? Good, they did. All right, we're done.'"

Both Carlos and James went through similar steps in making their choice as was discussed earlier; however, the process by which they did so varied drastically. This holds true for other participants as well, with Camila describing her process as "lazy" and Shirley recounting hers as "random."

This continuum reflects the idiosyncratic nature of a student's college choice process. It appears as though there are specific steps that all students must go through when making a

college choice; however, the way in which they travel through this process varies from student to student.

As is revealed in the comments above, there is evidence that supports and contradicts previous research on the college choice process. None of the students recalled going through the first stage identified by Gilmour, et al. (1981) and Hossler and Gallagher's (1987) model. It appears as though there was no conscious decision on whether or not to attend college. However, in support of both models, all seven participants recalled traveling through the additional steps of these models during their search and choice.

#### Making and Maintaining a Connection

Making and maintaining a connection with prospective students can be an involving process. As the students and I discussed their college choice process, I explored the ways in which they learned about specific colleges or universities and how they then went about gaining more knowledge regarding each one. For all of the students it appears that there were three means utilized in making and maintaining a connection with a specific institution: promotional materials from the schools, Internet (such as websites and email), and finally the campus visit. What I found through my discussions was that this connection was initiated when they first received a letter or brochure from the institution. The connection was either severed immediately after that point or maintained if the student chose to investigate further. This was often done by browsing the institution's website. After this exploration, the connection was again either severed or maintained. The final way a connection was maintained was through a campus visit. The students used these visits to gain a sense for what type of connection currently existed and/or could potentially exist between the student and the institution.

Each of these three means of exploration is a form of communication being used to inform the students about what the institution has to offer. During my third interview with Shirley, she talked about the importance of this communication to her: “It [communication] just makes all the difference in the world because they’re [colleges/universities] trying to show you what their college is like.”

### *Promotional Materials*

As mentioned earlier, many of the students remembered learning about different institutions upon receiving promotional materials from the schools after taking their PSATs, ACTs and/or SATs. It was with this letter or brochure that the students first learned about some of the schools they might be interested in pursuing. During our second interview, Carlos admitted that a lot of schools would have slipped through the cracks if they had not sent letters. He said, “Very few schools I managed to find without them coming to me first.... The letter made a big difference; without it, I think a large amount of the schools would have never been found.”

In my second interview with Diana, she recalled the letters being the initial contact. She said, “It was initially just that letter; the letter of like congratulations on the SATs or PSATs. That gets your attention ’cuz it makes you feel like they’re at least watching you or something.” After discussing this initial letter, Diana went on to talk about the importance of the other promotional materials, like brochures and pamphlets.

When you’re thinking about colleges, you’re like eager to get all the information you can. So every afternoon I’m like excited to go get the mail ’cuz I don’t know what’s in it and I’m like waiting for the different colleges and things like that. As cheesy as that sounds, I really think that’s how all high schoolers are at that point. It’s exciting

to receive things from the different universities, and it's even better when they sum up so many things in one place like a brochure or booklet.

One example she offered was "The Big Red Book" Cornell University sends to prospective students. Diana recalled, "I applied to Cornell because they had one of the nicest packages. They sent The Big Red Book. If you come here, everybody will tell you that's why they applied, 'cuz The Big Red Book is so sexy." In a follow-up email I asked Diana if she could clarify what she meant by using the term "sexy." She replied:

It's sexy in the sense that it's an attractive sales package. They made sure to include all the events, places, etc that would "turn you on" about the school....and it was a pretty comprehensive book...probably over 30 pages. I think that's the best part because most other text[s] I received from schools were too brief and didn't leave a well rounded feel for the school overall. The Big Red Book leaves you feeling like you've actually visited the campus and met people.

Another student mentioned the quality of Cornell's promotional materials. In our second interview Carlos said:

I really liked the materials that Cornell sent me [because] it was nice and it was well-presented, but it was very informative. I mean, it was clear; it really gave me the feeling that the school respected you and they just wanted you to see what they had to offer. They weren't trying to trick you into anything.

Both Diana and Carlos talked about not only the importance of getting the institution's name out by sending letters or other promotional materials, but they also stressed the importance of quality of presentation. Carlos recalled:

A lot of schools it looked like, “Hey, buy me.” Or some schools it just looked like, “We couldn’t afford anything better than this piece of paper so we crammed everything we know about our school into it”.... It definitely ranged in their presentation and I certainly think it probably made a bit of an impact on the initial schools that I was looking at and what schools got most firmly rooted in my mind.

Related to quality of presentation, several students mentioned the need for accuracy in these materials. In fact, Carlos went further and shared a story about how institutions would send promotional materials in two different formats: one for White students and one for racial/ethnic minority students.

Some of them [schools] sent me two [informational packets]. Some of them had all Black people in the pictures and one of them had all White people in the pictures.... The words inside were all the same, it was just the pictures of the people.... I appreciated the schools that didn’t seem like they were trying to run a con job or anything. I don’t think that sending me a packet with people who they thought I was going to relate to more really helped their school’s image at all because at that point you start looking at it and you start thinking, ‘Well, why are they trying to get you to relate to people? I just want to know about the school.’ So that didn’t help them too much.

These statements made by the students regarding the essential nature of receiving promotional materials from colleges and universities contradict the research presented by Smith and Matthews (1991) on how students choose a particular college. They reported that minority students do not consider publications and letters as important in their college choice. On the contrary, the racial/ethnic minority students in the current study discussed the value of

getting the institution's name out to prospective students and providing high quality, accurate information in an attractive presentation.

### *Internet*

The students not only talked about the importance of receiving letters from the schools; they also wanted other means through which to learn more details about the colleges and universities. The Internet was a helpful resource for many of the students. In fact, Carlos admitted, "I believe 90 percent of my research into a school was just browsing their website." Diana commented, "Besides visiting and doing a lot of research, I lived on Iowa's and Cornell's websites; I really did. Everything that happened I was on there." Michael talked about the Internet as a "no pressure approach." He said, "I guess the Internet was kind of a way for me to have a no pressure approach to looking at the schools.... [I could] check out colleges without actually having to apply or call somebody and have them talk to you about how great the school is." During my second interview with Green, he talked about his use of the Internet:

I had eight schools and I was trying to narrow them down. In the process of narrowing them down, I did a lot of stuff on-line. Like I went through ranks something dot com for colleges where you type in the major and they give you whatever they think their rank was. And then I would look at what some of the projects were that were going on there. I looked at how many professors were foreign and like how many names sounded like I could actually read. I couldn't visit everywhere so I would look at the pictures and see what the campus looked like. I'd try and read their info about their program; see what kind of facilities they have; just see what school would be the best school for what I'm doing.

Green was not the only student who used the Internet for a source of pictures from the campus. Carlos talked about searching on-line for pictures. "I looked on-line a lot for pictures of schools to find out what the architecture was like. A lot of it was building architecture and just general layout." Michael also used pictures. During our second interview he recalled, "I tried to see it [institutions] as closely as I could through the Internet and pictures and just reading and researching." Shirley talked about her use of the Internet as well, but did not address wanting to see pictures:

For me, it [the Internet] was very important. That was the first thing I turned to for information.... I'd go to College Board, do my factors, get my list of colleges, and on that they have a brief kind of outline of each college, then you can kind of quote-unquote narrow it from there. Then I would kind of go off to a college website and just click on whatever kind of interested me at the time.

Shirley not only talked about using outside resources, like College Board, which can be found on the Internet, but also using the institution's website. In a dialogue I had with her during our third interview, she shared:

Shirley: It [college websites] usually has like a spot for prospective students so you can click on that. It would just be like academics so you click on that or it'd be like they pretty much have a lot of the factors that you'd be looking at already kinda lined up for you so you just click on those things.

Researcher: So it's helpful the colleges and universities have designed their websites in ways that seems they know what is important to students and so they're addressing them on their websites, hopefully in an easy enough manner so that it's easy for you to find.

Shirley: Uh huh. Well, the thing is that's theoretically what they're doing. There are sections for it, but I found myself to be very frustrated a lot of the times with the websites 'cuz you try to find the most basic thing like what's the average class size; they don't say nothing like that unless it's really small.

So Shirley used the Internet quite a bit and liked that most websites had a section specifically designed for prospective students. However, as she mentioned, just because they have a designated area, it does not mean that all the information a person wants to know is right there or easy to find. Michael also shared his use of the Internet and he recalled liking the prospective student area because everything was in one spot:

I always liked the websites that had news of what was going on so you knew the exciting stuff that was happening on the campus. I also liked the ones that would have the prospective student tab. That way when you're looking into anything you just click on that and it takes you from there...that really helped because you almost get frustrated with it if you can't figure it out right off the bat.

What I found Shirley and Michael to be struggling with was wanting to have all the information they could think of at the click of a button. If the information was harder to find, they became frustrated. They were not alone with the desire to visit websites that were clear and easy to navigate. Green talked about his experience, "Some schools' websites are just hard to get around. I couldn't find a number for admissions to call for a long time for some of them so navigation is important; easy navigation is really important." Camila, too, felt the use of the Internet was important:

Nowadays when information is so readily available, it is really important to be able to get your hands on up-to-date useful information. I really do get the feeling that if a



school had a website that was out-of-date and difficult to navigate that probably a lot of prospective students wouldn't even look at it because they [the schools] didn't have the information [or] they're trying to hide something.

Diana also mentioned her desire for a nice college website to explore.

I mostly used the Internet to do most of my research; it was a lot easier to just get information that way.... I looked at like the way the website was put together; it says something to a lot of schools the way they present themselves to others. [It] just basically gives a feel of how the school is.

Diana went on to talk about the various media colleges used in their recruitment materials and how she liked the ease with which she could learn more:

I remember Iowa State had a lot of media oriented ways of recruiting. I remember receiving two or three different CDs, which were really cool how everything was kind of easy to access or you could just sit down and it would tell you about it. It was interactive, also. You had other schools that had this eerie look. Every website had their own feel so it had some impact.

Carlos summed up his opinion of the importance of the Internet by offering advice to higher education institutions: "If there was ever advice I could give to good schools, it would be make sure your website is intact; otherwise, they would have never gotten a chance to send me a second round of materials."

The Internet was not only useful in learning more information, but it also helped students stay connected. Michael shared why he thought the Internet was so important:

I think it [the Internet] was actually very important, even down to the applying process. I applied to Iowa State over the Internet and that made it a lot easier than

having to try to send in an application or if I didn't have the Internet I'd have to call and then get one faxed or mailed to me, so that made the applying process a lot easier.

Michael also talked about how the use of email helped maintain communication with schools:

It's easier for you to keep in contact with a certain person at the school because sometimes when you try to call and you have to go through so many departments to try to get to talk to this one person and then you don't end up being able to talk to them because they're away or something. You can just email them directly to their own email account and then they can email you back at their greatest convenience. Instead of having to play phone tag; you leave them a message and then let them get back to you whenever they can.

Increased technology, such as email, has allowed institutions and prospective students to stay connected much more easily. During our third interview, Shirley shared with me why she liked email. "It [email] gives you the anonymity.... I don't like to talk on the phone that much so it's nice to be able to theoretically send a sort of anonymous email."

In the April 30, 2004 edition of *The Chronicle of Higher Education*, Michael Stoner, the president of an integrated marketing, strategy, and technology company, published an article titled, "How the Web Can Speak to Prospective Students." Stoner reported the essential need for colleges to "get-fundamental." By that he was talking about changing the design, navigation, and architecture of websites to make them easier to use. The statements previously offered from the students who participated in this study would support such a claim. In addition, StudentPOLL (2004) reported that 26 percent of the survey respondents indicated that individual websites of college and universities were very influential in their

application decision. Again, the comments made by my participants would support this claim concerning the importance of the Internet on college choice.

However, the Internet is not being used by everyone. In fact, during my third interview with James, he talked about his limited use of the Internet because of the slow connection he had. James recalled, “[I used the Internet] a little bit, but not much mainly just because we had such slow, horrible Internet. At one point we had AOL and you had to sit for like ten minutes before it finally loaded up a webpage.” Due to this limited access, James relied on letters and phone calls. This finding actually contradicts the research conducted by Hodges and Barbuto (2002), who reported that rural students rated websites higher than did urban students. James was one of two rural students who participated in the study and he relied on the websites very little as compared to the other students in the study.

### *Campus Visit*

In addition to receiving the promotional materials and utilizing the Internet, prospective students are using one more method to gain more information about a higher education institution: campus visits. I knew at the start of this study that each of the students had conducted at least one campus visit because all of them attended Preview Day at Iowa State University. During my first interview, I explored the importance of the students’ college visits on their college selection process. I found that this, too, was an essential component of their college choice process. In my second interview with Green, he elaborated on the importance of his college visits. He said, “I don’t think you can pick a school without visiting it. It would have been impossible for me to go to a school without me walking on it; I wouldn’t have picked it otherwise.” As can be heard from his words, the campus visit was an

essential component in his college choice. I asked him why this was so important to him and he responded:

The campus visit was really important in my final decision.... [It] solidified what the school actually was like.... The more interactions I had; the better it was. The more stuff I got to see and do; the better it was. I kind of thought the less a school would show me; they're trying to hide certain things. The more they'd show me; they had nothing to hide. [Also,] how I was treated on the visits was really something I considered that was just icing on the cake that helped put one [school] over the top.

Shirley had similar feelings to Green in that she needed to do a campus visit. She said, "I wasn't going to go to [a] school that I hadn't visited so that's where I did a lot of like my quote-unquote narrowing down." She then shared why it was important for her:

Well, to me that was my entire connection...to what the college was all about. You can only find so much off the Internet. You can't find out like are the people nice. You feel better about the college, like you just have to make sure that it's not like totally sketchy.

James also talked about how the campus visit was important to him because it let him probe deeper into the university. "For me it was more important because I wanted to see if this is really where I want to go, and just kind of investigate a little further to make sure I made the right decision: explore the campus, what the dorms are like, what the food is like, and the environment around it."

Camila and Diana also reflected on the importance of their college visits; however, both of them commented on how they did not realize the importance at the time. Camila recalled, "Actually, I think when I was applying to schools I wasn't really thinking so much

about the campus visits, but retrospectively, I think, it gave me more of a feeling of how the campus was and I was more connected there so it was a big factor.” In fact, she mentioned that if she had visited more schools there was a strong possibility that she might have applied to more places. Diana’s story was similar, “When I was applying I didn’t think it would make too much of a difference whether I had visited or not; maybe it did subconsciously. But when I actually visited those two [Cornell and Iowa State] then it did make a difference.”

For these five students, making a college visit to the actual school they were considering was vital in their choice process. However, for Michael and Carlos, the college visit, while still integral, did not have to be to the specific college they were exploring. For example, Carlos admitted that: “It [campus visit] definitely gave me a better feel for what the school was like, something that I wouldn’t have gotten from my own research.” However, he went on to explain that the college visit did not have to necessarily be at a place he was pursuing. He spent a great deal of time on the campuses of Berkeley and Stanford, which provided him a good comparison to the places he was considering. “I guess being on the Berkeley and Stanford campus was definitely important. For some aspects it gave me a feel for what to look for.” Michael felt similarly. He had spent time on University of Nebraska – Lincoln’s campus, as well as Iowa State University’s campus. He was able to use those campus visits to help him learn about Arizona State University even without doing a visit. “Yeah, definitely being able to visit the other schools definitely helped because if I wasn’t able to visit any of the schools, I would have been up a creek.... Comparing what the other school would be like from seeing the other two schools helped out.”

Researchers have been exploring exactly how important the college visit is on the final college choice of prospective students. StudentPOLL (2004) revealed that “the campus

visit figures prominently in students' enrollment decisions" (n.p.). In addition, Sevier (1992) reported that African American college-bound students, similar to all other students, rated the role of the campus visit as significant in the college choice process. The words from my participants support the findings of both of these studies.

Up to this point, the three components (promotional materials, Internet, and campus visit) have been discussed as individual units; however, through my interviews with the students, I learned that it is the interplay of all three of them that helps to make and maintain a connection. Several of the students mentioned the importance of the personal touch. For example, Diana recalled the importance of personal types of communication. She said, "Yeah, feeling like the university wants you, rather than you working so hard to fill a spot. The difference between signing a letter with real ink; rather than stamping it on." She also shared a story about how Virginia Tech did not really communicate with her very well. She explained, "I felt like I was just another number so there was no real connection there." Her comment reflects the importance of making and maintaining a positive connection with prospective students and offering a personal touch whenever possible.

During my member check with Carlos I shared with him my observation concerning the importance of the relationship among these three areas and how I interpreted from my discussions with him and the other participants that the connection that is made between the prospective student and the higher education institution critically impacts college choice. I then shared with him the three areas that appeared to resonate with my respondents. His response follows:

Definitely, it's a combination of all of them and cross-reference information from one end to the next. I mean, if you have a publication that talks about look at all this cool

research we're doing and then you go on the website and you can't actually go in and see what they've discovered or see what exactly the more detailed aspects of it are, for me at least, that would be a down side.

Michael, during our third interview, came up with an analogy regarding the interaction of these three essential components:

It kind of made me think of like buying a car. The first part of the battle is them actually getting you on the lot. Then after they get you on the lot, you kind of browse through yourself and look at different cars. Then you might leave, but you're going to have a greater chance of staying in that lot and considering a car there if somebody comes up to you and talks to you about the car. Finally, you're not going to make your final decision unless you take a test drive in that car.

Michael's analogy included all three forms of communication: getting you on the lot equates to the promotional materials that get you to begin considering that school; the browsing through the lot equates to the Internet searching to learn more about the school; and the test drive equates to the campus visit. I found this to be an insightful way to reflect the importance of the interaction among these three very important ways in which higher education institutions communicate and connect with prospective students.

#### College Choice: A Pragmatic, Independent Decision

Throughout my conversations with the participants, I could see the previous theme of connection growing; however, it is not the only factor that impacted the college choice of my participants. While conducting the series of interviews for this study, I heard evidence of the students' practical nature influencing their college choice in terms of cost/financial aid and location/proximity; along with the independence the respondents exercised in making their

college decision. Therefore, my third theme emerged; College Choice: A Pragmatic, Independent Decision.

*Pragmatic Decision – Cost/Financial Aid*

During my second interview with my participants, I asked each of them to list the factors that influenced their college choice. I requested that they not list the factors in any order because I knew that would make them harder to recall. After the participants were satisfied that they had given me a complete list of the factors that were important to them during their college choice, I then asked them to look at the list and number them in rank order, with one being the most important factor (see Appendix D). Five of my seven respondents ranked cost and/or financial aid in their top four. In fact, James categorized financial aid and cost as the top two factors influencing his college choice. Financial aid was number one and he recalled his reaction when he received a full-tuition scholarship at Iowa State University:

They sent me a letter for Carver, I was like, “Hell, okay, that’s a lot of money. I like this.” So just checking what colleges offered me more money. Well, the main thing was I want to have to pay as little as possible, trying to keep the cost of attending low.... So I think that was probably a prime, decisive factor.

James ranked cost as his number two factor. He stated, “Cost was another big one [factor]. One of the things that I noticed is just the significant difference between if you are in-state or out-of-state.... That’s another reason I wanted to stay in-state was just because it would cost less.”



During my second interview with Michael, he ranked financial aid/scholarships as the second most important factor; thus revealing how integral it was in his college choice. He mentioned:

Probably second would be scholarships just because that would make me able to go out-of-state. I knew I could go in-state for pretty cheap and it would almost seem not worth it to go out-of-state. Like Duke and USC started getting outrageous to where it wouldn't be worth it to go that far away because it would just be costing me an outrageous amount. Like scholarship was basically the cost because it was just whatever the cost I would have to pay after scholarships. I was just trying to keep how much I would have to take out with loans and pay by myself to a minimum.... If they weren't going to offer me enough money in scholarships, I wasn't even going to consider it.

During my third interview with him he expanded a little more on this topic:

I would have loved to go to MIT or Duke, which would have intellectual influences. It would have a great quality of facilities and a good reputation and a good curriculum, but the cost and the financial aid has to come first because if I was just going on intellectual influence I would be spending a lot in student loans to go to a place like Duke. I think people have to kind of settle for what they can actually afford first and then try to go for the best intellectual influence after they found some schools they can afford. Either in the beginning or in the end, they [all students] had to figure out if they could go there, if they could afford it there.

As is quite clear in Michael's words, the amount of scholarship he would receive significantly influenced his decision about which school to attend. Camila and Diana both

recognized the financial aid/scholarship factor as their third most influential aspects. Camila was a National Merit and National Achievement finalist; therefore, she was receiving excellent financial aid offers from numerous schools. Although she had already ranked this factor as a three, she was thinking she might have wanted to put more emphasis on it. She recalled, "I suppose maybe financial aid should have been higher. I didn't exactly think about it so much because I always assumed that I would have good scholarships so I didn't really look at costs anywhere other than just out of curiosity." However, Camila admitted that scholarships and financial aid were integral in her decision. She said:

Scholarships and financial aid [were] very, very important. Places offering full-tuition was a definite plus. I would have felt kind of silly if I had gotten five or six offers for full scholarships and then went somewhere that wasn't offering me anything.

Especially since I was getting offers from pretty good schools.

Diana felt similarly about this factor: "Then senior year financial aid became a really big deal... With Iowa State, the biggest motivation for me to apply there was the scholarship that they were offering based on my PSATs because I was a National Achievement scholar." She went on further to discuss where cost of attendance came into the picture.

It wasn't like I was attracted to higher cost schools. To me, it didn't necessarily say that it was a better school because it cost more. But more so the financial aid, how much they were willing to help you with that cost. And there are certain schools that weren't that expensive, but they wouldn't help you at all. So as far as cost...how much my family would have to contribute out of their pocket, including loans.

During my final interview with Diana she talked more about loans. She said, “Loans matters, too, because you think you’re not paying anything now, well once you get out of school you’re the one that’s going to have to deal with all the loans, that’s important.”

Shirley also recalled financial aid being relatively important to her because she comes from a lower income family. “It’s [financial aid] important because we have a limited amount of money and I did not want to have like a lot of loans.... Like if I wasn’t getting any financial aid, then I was like, ‘No, I’m not going to go there.’”

As can be heard from the statements above, financial aid/scholarships and cost played a vital role in the college selection for many of the students. Two additional students, Green and Carlos, actually ranked cost and financial aid lowest on their lists, but both of them still talked about how they were important to them. During my second interview with Carlos, he recalled:

Well, I guess I was trying not to think about cost of attendance. I was looking at schools and making sure that their financial aid needs were met, but cost of attendance wasn’t an issue. Cost was one of the things that I was aware of and kind of panicky about, but it was something that I wasn’t letting it keep me out of any schools. Then after I submitted all my applications, I was thinking about which schools were offering scholarships, but not before that.

Green also ranked financial aid and cost factors as very low on his list. In fact, they were rated as 9 out of 10. However, when he talked about the factors, he sounded very similar to the other students:

I wasn’t looking at tuition, I was looking at how much it would actually cost for me to go to each school. I looked at how much I’m going to actually have to pay, counting

loans.... SLU is just really expensive, it's private. Their tuition was really high. Even though they were giving me so much [in scholarships] it was like there's no way; this just isn't logical for me to go here. So it [cost] played a big role.

Although Carlos and Green ranked this money factor low, it was still important to each of them and reflects the practical nature of their college choice.

Numerous researchers have examined the roles financial aid and cost of attendance play in a student's college choice. Across the board, researchers have found these two factors to be important in the final college choice of majority students, students of color, high-ability students, and students who choose to study engineering. Dating back to 1965, Richards and Holland reported students' desires to attend "low-cost colleges." Anderson (1976) reported high tuition charges appeared to seriously diminish institutional attractiveness to bright students. Students who participated in the current study were not only basing their decision on cost/tuition, but they were also examining the amount of financial aid being offered. Therefore, it is the relationship between cost and financial aid that is influencing students of today. This finding supports the work of Welki and Navratil (1987) who found that cost and financial aid opportunities were among the top influences in the college choice. In a more recent study, Hoyt and Brown (2003) reported both cost of tuition and receiving a scholarship as falling in the top factors students use in making their college choice. Although they maintained these two factors as separate while the students in this study connected them, their results were still supported by the findings of the current study.

Richards and Holland (1965) were the original researchers who separated multiple college selection factors into four major areas of influence; one of which is called

practicality. It is within this area of influence that cost and financial aid reside. However, practicality also includes location and proximity to home, which will now be discussed.

*Pragmatic Decision - Location/Proximity*

Again, a large range was used when ranking the importance of the location/proximity factor. Two students rated it as their number one influencer, while another student rated it as his number 10. Although there is such a large spread, it is important to note that all of the students at least recognized it as something they considered when making their college choice.

James was one of the students who was very practical in his decision. During our second interview he talked about the distance he felt comfortable being from home, “I wanted to be away from home, but close enough that if something goes absolutely horrible, there’s family.... If necessary, [I could] find easy transport to get back home again.” Although Green ranked location/proximity as the lowest on his list, he talked about the importance it played in his decision.

I think the first thing I narrowed it down was with location.... I didn’t want to be too far away from home. I didn’t want to not be able to come home in a weekend if I had to. Someone could drive up or whatever. I wanted not more than 10 hours away, that’s for sure. Somewhere in the Midwest.

Diana also talked about the importance of proximity in her decision. “I didn’t want to go too, too far, but I definitely didn’t want to be around home.... I tried to stay on the East Coast at least. Somewhere fairly close, but not too close.”

Previous research tells us that for majority students and students of color alike, location and/or proximity appear to be important when making their college choice. The

students' statements would support the work of Trusheim, Crouse, and Middaugh (1990) who reported proximity to home as one of the most important attributes that predicts enrollment, following quality of academics and quality of programs in the applicant's major. Numerous other researchers included location and/or proximity as important factors that influence a student's college choice (Bradshaw, 2001; Johnson, Stewart, & Eberly, 1991; Kellaris & Kellaris, 1988; MacKenzie, 1985; Stewart & Post, 1990; Welki & Navratil, 1987).

Shirley was not as concerned with proximity as she was with location. She said:

I also like big city versus small city. For small cities I had these certain assumptions [that] there's not going to be that much social events outside the college. If it's like a big city, then I could just always go around to the city and do stuff.

In terms of proximity, during our second interview Shirley said, "I really didn't think that it was that big of a deal to be that far away from home." She was not the only one who was not concerned about being a great distance from home; Carlos revealed similar feelings. "For me, it was a location thing; it was purely where it was relative to what was around it.... Going 10 miles away did not feel like going off to college. I'm into big adventures." Shirley and Carlos are both from big cities in California so it made sense that it was important to them to find a location that offered things they were used to getting in their hometowns.

The final two students, Michael and Camila, talked about needing to move away from their home states to experience something new. In fact, they both ranked location/proximity as their number one factor; however, it was not important in a practical sense. Michael commented, "Being from a small community, I kind of wanted to get out and experience other things than Nebraska." I was curious as to why he felt that way and he explained:

Initially I thought location was the factor, but I think diversity was a part of [it]. If I were to locate myself in Nebraska, I'd be around the same environment that I was and with very little diversity. If I went someplace like the East Coast or Southwest, I would have greater diversity.

For Camila, she just wanted to leave Alabama. She said, "One of my main requirements for college was that I get out of Alabama." Again I was interested in understanding her strong desire to get out. She replied, "There's nothing particularly wrong with Alabama; I have kind of moved around a lot and was getting tired of staying in one place."

Michael and Camila's comments support the work of Hodges and Barbuto (2002) who reported that proximity to home was not an important factor to the students in their study. Furthermore, their statements contradict the numerous researchers listed above who have found a positive relationship between location and/or proximity to home and a student's college choice.

Although some of the students talked about location and proximity in a non-practical way, all of the students in this study appear to have gone through their college choice in a pragmatic fashion. For example, Camila talked about needing to get out of Alabama, but she also mentioned that she was not going to consider attending a school that did not offer her a full-tuition scholarship. Michael also wanted to get out of Nebraska, but he made the comment, "If they weren't going to offer me enough money in scholarships; I wasn't even going to consider it." So as can be seen by examining these two factors together, cost/financial aid and location/proximity, the students in this study made their college choice using a pragmatic approach.

*Independent Decision*

A great deal of literature has reported that the advice of others is an important factor that influences a student's college choice (Gilmour, et al., 1981; Johnson, et al., 1991; Kellaris & Kellaris, 1988; Sevier, 1992; Smith & Matthews, 1991; Stamats, 2002; Welki & Navratil, 1987). This advice is coming from parents, relatives, alumni, high school teachers, guidance counselors, peers, friends, and/or religious mentors. Since I was aware of the importance of this factor prior to conducting the interviews, I was quite surprised when only one out of my seven participants mentioned advice from others as being significant when she was making her college choice. In fact, Shirley rated advice of others as her fifth factor, which included advice from her peers, high school teachers, guidance counselors, and mother. During our second interview, Shirley commented, "I guess I'd allow like peer interpretations like if they hadn't heard of it [a school] then you could make the wrong assumption that it wasn't a well known school or something. Also, just like talking to some of my teachers, too, and my counselors." Shirley then went on to talk about her mother's influence:

Ultimately it came down to me, but your parents have varying levels of guilt slash influence that they can put on you. Yeah, it's my decision, but if my mom doesn't like it then it makes the decision a whole lot harder.... With the combination of like my friends and my counselors and my mom, they did really affect where I applied.

During my member check with each of my students, I addressed the lack of emphasis placed on advice from others. I wanted to learn more about the independence these students appeared to exhibit when making their college choice. Michael's reaction was, "I think a lot of people give you advice, [but] they leave it up to you when it comes down to it. You have



to make your own decisions.” He went on to say, “Quite a few students have to pay for their own schooling or at least a pretty big part of their own schooling so I think that’s why it’s kind of an independent decision, because it’s going to be on you, not on anybody else.”

James and Green both talked about how their parents offered advice, but left the decision up to them. James commented, “My parents did give advice, [but] mainly they [asked], ‘Where do you want to go? You decide because you’re the one that’s going to have to do this.’” Green recalled:

I guess the most advice they gave me was other factors to look at in the decision process.... I would look at that and then I would make my decision from that.... It was pretty much all on me. They [his parents] trusted my judgment. I took their advice into account, but then the choice, in the end, was still mine.

Diana talked about how she believes parents have changed through the years and are now leaving the decision to be made with the student. She said:

I think before you had a lot of parents pressuring their kids to go to certain schools, but now I think generally, at least our generation, the parents are more lenient and just trying to look out for their kid’s best interest.

Camila remembered her parents really giving her the freedom to go wherever she thought was best. She recalled, “They would have supported me going wherever I wanted to go. They were really good about not even just letting me make my own choices, but sort of making me make my own choices.”

The statements offered above somewhat support, yet contradict, the literature regarding the consideration students give to the advice from others factor. As can be heard in their words, many of the students talked about receiving advice from their parents; yet, they

went on to say that the advice was not used in making their final college choice. They would do with the advice what they wished, but as Michael said, “When it comes down to it, you have to make your own decisions.” This finding actually relates very well to what Bradshaw, Espinoza, and Hausman (2001) reported in their study. They, too, found that the students failed to articulate the significance of parental advice; however, they recognized that the parents still played a role. This role is different, though, than previous literature reported. For the students who participated in the study conducted by Bradshaw, et al., their “parents played more of a supportive role than a directive role” (p. 21). I believe this is exactly the case for the students who participated in this current study.

This combination of the students’ independence along with the practical nature of their decision is only one part of the students’ college choice process. There was another strong combination of factors, intellectual and social, that also affected the college choice of the students who participated in this study. This final theme, To Study AND To Play, will now be addressed.

#### To Study AND To Play

As was explained earlier, upon completing my interviews with my respondents, I created a spreadsheet that presented all of the students’ responses (see Appendix D). Analysis of this document revealed that students were placing a strong emphasis on intellectual factors and social factors. In fact, the rankings within both the intellectual and social categories ranged anywhere from one to seven; suggesting the importance each of these areas had on the students’ college choice.

*Intellectual Factors*

The quality of curriculum/academic program was the one intellectual factor that was important across the board. Although the rating of this factor for each of the students varied from one to five, the significance of it cannot be denied. During our second interview, Shirley talked about and ranked this factor as number one. She explained:

Well, I think it was important to me because if it's a bad program then I'm going to have a bad education, and that's what school is all about. I wanted to be challenged.... I would not consider a school if it didn't have math, science, or engineering.

During our third interview Shirley talked about this further:

That [strength of program] was what the main reason of going to school was about. Like if it wasn't a good program, then it wasn't a good school. That's the main reason I'm going to college was for an education so if it's not a good education why would I want to go there?

James also talked about the quality of the program in his third interview. He shared, "I wanted to make sure I was going to get a decent engineering program and not one that's just pretty bad." James was the student from rural Iowa who knew he wanted to go in state in order to keep his costs low, so his choices were Iowa State University, University of Iowa, or University of Northern Iowa. He ended up choosing Iowa State University, the school that has the strongest engineering program in Iowa. He recalled:

Coming here I knew I was okay; engineering had a reputation for their programs.

Saying that I graduated from Iowa State was actually going to have a little bit of

meaning to it. I knew if I came here, I will have gotten a good knowledge of the program.

The comments made by these students reflect the important nature the quality of the program has on college choice and supports the findings of numerous researchers who have reported this factor to be significant in students' college choice. Most notably, in an annual TeensTALK survey conducted by Stamats (2002), "top-tier teens are looking first and foremost at academic program offerings" (n.p.). In fact, they reported that the number one college characteristic was program quality.

Shirley and James were not the only students who ranked quality of program as significant in their college choice; Camila also shared why she ranked this factor as one that influenced her decision. She said:

Going to college is completely academic for me because that's the whole point of it...to surround yourself in your academic community.... I wanted to go somewhere where I could do something that I would be happy with. I got the feeling that I would do a lot better at a strong engineering school.

During my second interview with Diana, she explained why strength of engineering ranked second on her list of factors. "I just felt like above anything else, I'm going to school to learn.... I placed a lot of emphasis on the kind of education I got so I couldn't just go to Bob's University." She went on to explain that there was a difference between a "prestigious" school and one that offered a quality program in her area. She said, "For example, like when I was looking at Harvard it was a great school, prestigious and everything, but as far as engineering, it didn't rank at all so that was automatically a no. I wasn't just going to school just for anything." However, after talking to Diana further, she

shared that ranking was something she considered as well. “Basically, just a school that did well in what I was looking for and then was recognized for it because I think it shows a lot to have that kind of recognition even though some of the times it could be a little inflated.” So Diana combined and actually rated both quality of program/curriculum and reputation/rankings as her number two factor. She was not the only student who considered rankings to be related to quality of program. In fact, Shirley shared with me how rankings were important to her:

I didn’t apply to college[s] based on name, but I did use reputation as a factor on my decision-making.... I wanted to go to a place where people would be like “oooh.” Not necessarily like you go to the best school, but I definitely didn’t want to go somewhere where I had to like defend where I was going.

As can be heard from her words, Shirley felt that the reputation of a school was extremely important in her college choice. Shirley also was the student who considered advice of others as significant in her decision. In fact, she later went on to share the difference between MIT and Iowa State. She said:

If it’s MIT, people know about it and it’s ranked in the U.S. News thing. You have a certain amount of pride about like getting in there, going there, applying to there. I remember getting a lot of crap about Iowa State.... I didn’t want to like disappoint people or go against what they thought.

Smith and Matthews (1991) conducted telephone interviews with current freshmen to inquire about the important factors that influenced their college choice. A model was created to help explain which factors actually predicted entry into a particular school. One of three aspects they found that affected a student’s choice to attend was the reputation of the university. This

included the academic reputation and the reputation the university has among the student's friends. Through Shirley's statements you can hear how her college choice was influenced by the school's reputation, in addition to her friends' and family's opinions.

Instead of looking at rankings/reputation as an indicator of quality of program, Michael shared how he first determined quality and then related it to the facilities that were available.

Well, basically the big thing that I came to understand was the ABET certification schools get. I started looking for that and I figured that if they were certified and accredited then they would be of comparable quality essentially. So that was like the first splitting of the groups.

Michael then went on to talk about how he narrowed schools down from there. "Then to distinguish between all the accredited schools, I kind of was just going by the facilities that they had. How new their facilities were for my department and how well their program was known." During my member check with Michael, he also shared what the facilities offered him:

Basically, no matter how good the teacher was, if they didn't have very good resources [facilities] then I wouldn't be able to do as much hands-on stuff that I felt was kind of important.... Basically, it boils down to a technology kind of thing because with technology constantly changing, if you have old facilities you're not going to be able to learn the new techniques that are going to be in the new job market. So I figured if I wasn't able to utilize modern facilities then I wouldn't have the kind of degree that I would want coming out of college and that companies would also want coming out of college.

Michael was not the only student who looked at facilities along with quality. In fact, Green made the relationship between the two:

Yeah, the quality of the program was really important, like the facilities that they had and the teachers. Just seeing the facilities was really important and seeing the classrooms and getting a general feel of what it would be like. I could definitely tell that some schools had better facilities than other ones and that was important.

For Green it appeared that his definition of quality was based on the facilities that were offered at the institution, as well as the faculty who teach there. In fact, later in our second interview he went on to talk more about what he really wanted out of facilities:

I wanted to make sure I went to a school where I could get hands on [experience]. [It] was really important. I guess that goes with facilities. I don't want to go to a school where I just got a book and a teacher and this is engineering. I wanted to actually be able to do stuff, do the instruments, see how this works with this, and actually apply what I had learned. I wasn't sure if I was going to have a computer here so it was important to me that there was a lot of computer labs around. In engineering you use a lot of expensive programs that you couldn't buy yourself so having the labs was important. Then as far as the extra cool stuff that they had like wind tunnels. It kind of said something about the school if they had more high-tech stuff.

Similar to the comments made by Michael and Green, Carlos also placed importance on facilities; however, he specifically talked about what the library had to offer. "I wanted to go to a place that had a significant library, [that had] a combination of two factors: a big library with a lot of material in it and also a library that looked like a place that you could sit down in and study in and do research."

In addition to the importance of facilities in Michael's and Green's college decision, they also indicated the size of the institution affecting their decision. Green recalled:

I actually didn't want to go to a huge school at first. I wanted a small school because the main thing I was worried about [was] the class size. I just didn't want to be in all lecture halls. I didn't know about the recitation, office hours, [and] learning communities. Once I learned about all that stuff, the size didn't really matter. I started to realize that big schools are going to be able to have a lot more resources than small schools.

Michael remembered a similar situation:

I had to decide whether I wanted a big school or a medium school or a small school.... So it was kind of whether I wanted to go and make that huge jump from a small town to a big university or make a really small jump from a small town to a small university or a middle sized one. It kind of ties in with the resources thing; if it was a bigger university, it would have the resources available.

Size of the institution was an important factor for Green and Michael; however, only as it related to the facilities that were available at the school. This finding would support the work conducted by Welki and Navratil (1987) who reported size of the school as one of the most important variables in college choice. However, their comments on size contradict the work of Webb (1988) who suggested that when recruiting non-White engineering students, schools should emphasize institutional size only if it is less than 20,000 students.

In terms of facilities, Bradshaw (2001) reported that African Americans rate quality of academic facilities higher than all other racial/ethnic groups. This did not appear to be the case in this study. Of the three students who rated facilities, the rankings ranged. Green, an



African American, rated it as two; Michael, a Latino, rated it as four; and Carlos, an African American, rated it as seven. This finding reveals that it was not necessarily the student's race/ethnicity that determined the importance of facilities.

While Carlos considered facilities, his number one factor was intellectual environment. To determine what the intellectual climate would be, he researched the profiles of the students who attended specific institutions. He recalled:

I guess I looked a lot at the entering class profiles. I specifically wanted to go to a school that had really high SAT scores for its entering class, but not necessarily a high GPA.... I preferred actually to go to a school that had slightly lower GPAs being a lower GPA student and high SAT scorer.

During my final interview with Carlos, I asked him to share a little more about what was so important about the intellectual environment. He responded:

When I was choosing a school, I was kind of tired of dealing with the same old people and a lot of them didn't have very innovative thoughts.... I want to be able to work in an environment where I can sit down in a team with five or six other people and really get a good conversation going. I don't care if it's working with homework or working on a project, but be able to bounce ideas back and really float an idea. Because I've had that happen on rare occasions before where we were in a place where we could really just get an idea and take off in the right atmosphere and that was my number one thing that I wanted out of college; I wanted to be able to be in a place where I can really get around people who would basically bring out the best in me. Make me think at the edge of what I could be thinking.

Carlos's comments reflect the conclusions of Douglas, Powers, and Choroszy (1983), who reported that higher-ability students are concerned with intellectual stimulation, intellectual climate, and quality of interactions with fellow students. Carlos was in search of a school that would offer him the challenge to think beyond the norm and he felt this could only be attained if he was placed in an environment that promoted such activity.

Overall, the comments provided above reflect the emphasis placed on the intellectual climate schools offer and support the findings of Bradshaw, et al. (2001), who reported, "At the core of the students' college-going decision was a desire to attend a high-quality college or university" (p. 21). That is exactly what the students in my study were looking for - a high-quality program in which to receive a top-notch education.

As could be heard from the voices of the students, the intellectual emphasis greatly influenced their college choice. The intellectual emphasis included such factors as quality of program, rankings/reputation, facilities available, size of the institution, and intellectual environment. On the opposite side of intellectual emphasis lies another factor the students greatly valued, the social emphasis. This factor will now be discussed.

#### *Social Factors*

The students who participated in this study listed several factors related to the social emphasis that impacted their college choice, including social climate and activities. Five out of the seven participants mentioned the social climate factor as being influential in their college choice. During my second interview with Camila, she shared with me what she was looking for in the social climate: "I was looking for a different kind of a place. Some place like I'd never been before. Definitely out in the middle of cornfields was a new experience for me." She then went on to talk about the differences between a large city and a small town.

Boredom is very bad; [I] didn't want to be bored. I wanted something cool to do. [I] didn't want to be in a little one horse town with one general store and two restaurants. I've noticed that people are more interesting in a more interesting city. I've noticed that being in larger cities there are more choices. If you are going out to dinner, there are 40 restaurants as opposed to four. Sometimes in bigger cities you find some quirky little place that is just cool to go and explore.

Similar to Camila, Michael wanted a place that would offer him new experiences.

With that factor [social climate] it was gonna be like kind of the area I was living in. If it was a big city, would it have everything that I would want? Also, kind of the people that would be around there, like the diversity of the environment. How much would I get to experience at this certain area? Coming from a small town, you want to get out and see what else there is in life and expand your views on what the world's like.... I was just kind of looking for opportunities, other things to do other than your education.... Basically, I was looking for the classic college campus, a college environment. [I was] just looking for getting that college feel out of the environment.

In addition to having things to do, Michael introduced the idea of what the environment offered. Several other students talked about the social climate in terms of being a comfortable environment or a "good fit." Shirley explained:

I was really excited about going to college and everything. Not necessarily [to] socialize, like do they have parties, but will I get along here? I felt like that was next to education, if not the most important. I was going to be spending my time there for the next four years and I wanted to like the place.

During my second interview with Diana, she also talked about the social climate in terms of the environment.

It was really a matter of a good fit. I attended a lot of college info sessions and heard the people talk about their schools and they would all say the same thing, “We’re all good schools, but if you don’t feel good in the environment, then it won’t matter.” So I was looking at the different environments. It was just a matter of whether I would be a good fit in there.

Diana offered an example of what she was talking about by sharing with me her experience of visiting MIT and getting a feel for what their environment is like. “For MIT it just looked too dead and like techy. As much as I loved engineering, I’m not the type to be behind a computer all day. I like to have different types of things going on. It just seemed so bland.” So Diana’s campus visit helped her to get a sense for MIT’s environment and she was not impressed. She did not feel that it would be a good fit for her; therefore, she didn’t even apply.

Green also talked about the importance of the environment, only he examined it from an architectural sense. “I guess the architecture and just like the way it’s set up. I liked the [Iowa State University’s] architecture. I liked how it was really diverse; it’s not all old, it’s not all modern. It’s like a good mix.” He went on to talk about the “vibes” he would get about schools when he was visiting them. These vibes contributed to his social climate factor.

As far as the vibe I got, I don’t really know how to explain it except like if you walk through a certain neighborhood and you’re like, “This is just really nice; it makes me feel all warm inside,” as opposed to like if you walk through a different

neighborhood, you're like, "Ah, I don't think I want to live here." You can't go to a school that doesn't feel right.

Through his comments, you can hear the importance of the social climate in his decision on where to attend. Another component of campus environments is the people. Green also shared the importance of how friendly people were during his campus visits, "I think it was the people just seemed down to earth and outgoing. Like if you've ever noticed around here [Iowa State University] when you walk down the sidewalks people will just wave, or if you give a nod, they'll give a nod back."

During my final interview with Shirley she also mentioned the impact the diversity of people had on her decision. "I guess as far as college factors, diversity of people in general could be a factor. That was kind of with my social...because like if everyone's boring then the social climate sucks."

The statements highlighted above regarding the environment and/or appearance of the campus and the friendliness of people support the findings reported by StudentPOLL (2004). Students who had reported visiting at least one campus were asked what aspects of the campus visit had the most positive influence on their college choice. The researchers found that "28 percent of respondents indicated that the appearance of the campus had the most positive influence while 28 percent also reported that the friendly people and friendly atmosphere on campus factored heavily in their choice of a college" (n.p.). This finding suggests that the hospitable nature of the community and the friendliness of the people prospective students encounter during campus visits have a significant positive affect on a student's interest in a specific school.

Diversity was also addressed as being a component of the social climate. With my participants all being students of color, I assumed that diversity would have been a major factor for them when they were making their college choice; however, only one student, Carlos, initially ranked it. Here's what he had to say:

When I was doing U.S. News searches I specifically checked the box that said this [school] meets over 30 percent diversity. My initial list, from day one, all of them came out [as] diverse schools.... I realized that I'd feel really weird being in a place that wasn't.... I mean coming from all these diverse places, going to a place that was not diverse, I didn't particularly think I wanted to go into at that point.

In the previous statement, Carlos was specifically speaking about the racial/ethnic diversity that existed on campuses. However, during our final interview he expanded on his ideas of diversity to include people of different backgrounds.

No, it wasn't just a race issue certainly. I didn't want to be on a campus where everybody thought the same way and/or had the same kind of mind-set. I think it really detracts from an education when everybody has the same mind-set 'cuz they're not really thinking about it in different ways. In the past, when I'd be working on projects, the way that I had felt that we had gotten the best results was when people had completely different ideas about things, when people [were from] completely different backgrounds.... I just felt comfortable [and] I learn more when I'm around different people.

Several other students spoke to me about diversity not in terms of racial diversity, but in terms of diversity of people, such as religious differences and socioeconomic status differences. Michael, during our second interview, shared:

I was kind of looking for racial diversity and diversity of backgrounds. Just like different religions [or] being from different areas. People from different areas have a lot of different views.... I really wanted to have the experience of meeting people from all the different backgrounds and experiencing different racial diversity and area of diversity, people being raised in different areas. That was kind of one of the things I wanted to do was to get out and experience what you can't really experience in rural Nebraska.

Diana shared similar thoughts. She recalled, "I think about diversity at so many different levels.... My definition of diversity includes racial diversity, diversity in the intellect, SES, and so forth." Diana also talked about diversity of religion being something she truly values:

Cornell emphasizes a lot of acceptance especially with religion. They're proud of the fact that they are one of the first universities without any religious affiliation so they actually have buildings and facilities that are geared toward all religions at once in one place. I appreciate the fact that there are different backgrounds, different religious theories so that kind of diversity is what is really important to me.... I didn't feel the need to be in a place where everybody looked like me, as long as the people there were diverse in their thinking or diverse in their exposure to other people.

For Diana, diversity included several aspects: race, religion, SES, and intellect. To learn more about my participants' views on diversity, I chose to directly ask them about it during the member check. In contrast to Carlos, Michael, and Diana, there were a couple of students who admitted that diversity was never really a factor during their college choice. Camila recalled, "I didn't really care so much about diversity, I guess. Having been to incredibly

diverse schools and not very diverse schools, I kind of figured I can adapt to any level of diversity or non-diversity and it doesn't matter." Green felt similarly.

My mom is White and my dad is Black so race is, I never really thought about it. I mean, it was just never a big deal even if it was all Blacks or all Whites. I was totally comfortable either way. I didn't really see a difference.

Stewart and Post (1990) found that minority students choose a school that offers a larger population of minority students so they are able to pursue a social life with others like themselves. They reported, "If there is a substantial number, students can feel a sense of identity with others" (p. 159). This statement is supported by the comments made by Carlos, Diana, and Michael, which address their desires for a campus to offer some level of racial diversity. However, Camila and Green stated that they did not need to be around other students who were African American; they were comfortable in places where they were either the majority or the minority. It is important to remember that six of the seven participants were multiracial; therefore, these findings could be a reflection of the students' race salience.

In addition to the social climate being an influential factor for the students in this study, activities or clubs and organizations were also listed by several students. These factors are included in the social emphasis category. Green actually rated activities as his third factor; considering it to be essential in his college decision. He said:

I love to be outside and do stuff. I can't just sit inside and not do anything and just study the whole time. I always played sports with friends or a club or went out and did stuff. I figured I wanted to go to a college where I could do a lot [or] get exposed



to stuff other than just school. I wanted a school that not only had what I liked, but also like new things.

Like Green, James wanted to find something to do outside of classes. He recalled:

I was just kind of curious what activities [were] offered; what various things you could do on campus; what groups you could get involved with. I wanted something to do outside of classes. I wanted to make sure there's a form of escape and have a little fun once in a while.

Camila wanted other things to do as well. She said, "Clubs and organizations was another [factor]. I wanted to have fun and be busy.... I wanted to join maybe a car kind of club. I don't have a lot of shop experience, but I wanted to do something maybe like a solar car."

Finally, Carlos was interested in attending a school that offered extracurricular activities. He said:

I wanted to go to a school [that] offered the equivalent of intramurals. At the time that I was looking, I was running track and I was on the football team so I wanted to make sure that if I decided that was something I wanted to pursue [I] had the option of going on and playing club football or club lacrosse.... I also looked into facilities, like I looked into what kind of weight rooms they had, basically gym, fitness type equipment. [I wanted to know] whether the equipment was available to students as opposed to being specifically for their teams.

These students' comments support other research that has been conducted. For example, Weiler (1996) reported that recreational options influence the college choice of high-ability students. In addition, Smith and Matthews (1991) found that the presence or absence of traditions and special activities at the university may influence the decisions students make.

Through the students' comments provided above, it is clear that the social emphasis played a role in the college choice for the students who participated in this study. In fact, it almost appears that the students placed an equal emphasis on social and intellectual factors. During my member checks with my participants I asked them about this. What I found was a strong desire for a "balance" between the intellectual and social emphasis. Green mentioned that a balance is needed. "I think it's very important. I looked at some schools that were very much social and not a good balance. I think there are some students that wouldn't really care about the play; they just want to go study, but I think overall it's got to have a good balance." Diana, too, shared her thoughts on the balance that is needed between the intellectual and the social:

You're going there first and foremost for academics, but at the end of the day, what you enjoy after four or five years.... If you don't feel comfortable, you're basically setting yourself up for an injury. I mean it's just a big dichotomy, it just has to be, all work and no play makes anybody a dull person.

Similarly, Carlos talked about the need to have both.

I think social is an environmental thing and once people realize that they're going to get the education they want then it goes down to, 'Am I going to get the education I want, the way I want?' Because you don't want to go somewhere and get a good education but hate every second of it.

Michael offered an example that directly supports this claim that a balance between the two is needed. "I think it's almost taught from the beginning that you have to do a little bit of both [intellectual and social]. Balance yourself." He then went on to describe the differences

between Iowa State University and Arizona State University in terms of their intellectual and social emphasis:

Well, I think I came to know how studious Iowa State was when I was on my visit. When we talked to other students, they all seemed like they were being tutored or tutoring somebody or a little of both. I don't think there was really too much talk about other fun activities to do off campus.... Arizona State is kind of notorious for being a party school.... I was thinking that whichever environment I was in, I would kind of mold myself to fit. So if I were to go to Iowa State, I would fit in with that strict kind of buckle down on my intellectual kind of stuff and almost forget about social. I felt like I would stress myself out and then it would end up being bad for me in the end. Whereas, at Arizona State, I have enough self-discipline to be able to excel at academics, but still be able to have fun at the same time. So I felt like if there was a greater influence to have fun, I could say "No" to that, but if there was a great influence to study more, I wouldn't really say "No" to that because I'm competitive.... I thought to get the most out of my whole college experience I would be better off to go to Arizona State.

As Michael made apparent in his story, it is important for higher education institutions to highlight both sides of their schools. As Diana said, the academics are at the forefront; however, colleges must not hide or neglect to inform students about the social side as well. These comments support the findings reported by Weiler (1996) that a non-academic factor, such as recreational options, has about the same impact as academic concerns on the college choice of high-ability students. Addressing both sides, the academic and the social, appears to be important when students are making their college choice.

## Summary

In summary, the analysis of the interviews resulted in four themes; each of which included the participants' voices in order to tell their stories from their perspective and to support the themes. The first theme, College Choice Process: Universal yet Idiosyncratic, revealed that the students experienced a similar process when making their college choice; yet, the ways in which they journeyed through this process were quite different for each student. The process ranged from being "iterative" to "random" to "lazy." Making and Maintaining a Connection, the second theme identified in this study, highlighted the importance of higher education institutions continuously communicating with prospective students. This communication often takes the form of promotional materials, Internet websites, and campus visits. The third theme, College Choice: A Pragmatic, Independent Decision, addressed the practical way students are making their college choice by considering cost/financial aid and location/proximity. In addition, this theme also pointed out the independence the students experienced when making their college choice; free from the pressure of parents, guidance counselors, teachers, and friends. The final theme, To Study AND To Play, revealed the need for schools to highlight the quality of both their intellectual and social environments. The students in this study wanted to attend an institution that offered a balance between these two factors.

Having summarized my analysis, I will now conclude by sharing the meaning of what I have found. The following chapter begins with an overview of the study. I then revisit the research questions and presuppositions that were introduced in chapter one and report how the findings relate. Implications for practice are then addressed, followed by

recommendations for further research. Finally, I have offered my personal reflections as a researcher.

## **CHAPTER 6: CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS**

I employed a phenomenological qualitative research methodology in this study to gain a better understanding of the process high-ability, engineering, students of color journeyed through as they were making their college choice. In addition, this study was designed to identify the factors that were viewed as integral in the final college decision of these students. Using this approach allowed me to explore Hossler and Gallagher's (1987) 3-phase model on college choice and to understand how my participants' college selection experiences relate to this model. The three in-depth interviews I conducted with each participant offered me a context in which to understand the students' college choice, a detailed description of their process, and a list of factors with explanations as to why each of them was significant to the students.

All seven of the participants attended Preview Day, an annual engineering recruitment program held at Iowa State University that recognizes the scholarship of high school senior students of color. The participants included seven students from six different states: Alabama, California, Iowa, Maryland, Missouri, and Nebraska. Five of the students were African American and two students were Latino. In addition, three of my participants were female, while four were male. Finally, four of the students I interviewed were Iowa State University students and the other three were attending Arizona State University, Cornell University, and Massachusetts Institute of Technology.

Four themes emerged during the analysis of the data: College Choice Process: Universal yet Idiosyncratic; Making and Maintaining a Connection; College Choice: A Pragmatic, Independent Decision; and To Study AND To Play. The first theme, College

Choice Process: Universal yet Idiosyncratic, reflected how all of the students talked about going through a similar process while making their college choice. However, the ways that students journeyed through this process were quite different. They ranged from Carlos's "iterative process" to James's simplistic process. The second theme, Making and Maintaining a Connection, revealed the importance of continuous communication between the college and the students. This communication often started with a piece of promotional material, continued with Internet research (involving searching college websites), and persisted with the campus visit. The students in this study talked about the significance of each of these forms of communication and how they served to make and maintain a connection between the student and the school he or she was exploring. College Choice: A Pragmatic, Independent Decision was the third theme identified; it focused on the practical approach these students used while making their college choice. They were all very concerned with cost and/or financial aid and location/proximity was of consideration to several. In addition to these practical considerations, the students talked about the independence they felt they had in making their college choice. They believed that the final decision was up to them and that their parents, guidance counselors, teachers, and friends played minimal roles in their college choice. The final theme, To Study AND To Play, reflected the importance these students placed on both intellectual and social aspects of the college environment. The school must offer a strong program in the area of study students wish to pursue, as well as offer a social environment that allows the students to feel comfortable.

I cannot stress enough the importance of remembering the context of this study when considering the results. When interpreting the findings, it is essential to remember that the participants in this study were students who are from educated, middle-class, multiracial

families who appear to have life experiences unlike many other racial/ethnic minority students. Therefore, when considering the results of this study, readers must keep in mind to whom these findings truly apply.

### Conclusions

Having discussed the background of this study, the literature review, the methodology and methods employed, a detailed description of the participants, and the analysis of the data, I will now turn to the conclusions, revisiting both the original research questions and the presuppositions identified at the beginning of this study.

#### *Research Questions Revisited*

The research questions utilized in this study were informed by Hossler and Gallagher's 3-phase model on college choice. The first question related to the three phases Hossler and Gallagher suggested all students pass through when they make their college choice, Predisposition, Search, and Choice. During this study, I explored whether the students identified a similar process. The theme, College Choice Process: Universal yet Idiosyncratic, suggested that the students did not identify going through the first phase, Predisposition, which is where the decision to attend college is made. The students in this study remembered always knowing that college was the next educational step. However, my participants did appear to travel through the last two phases of Search and Choice that Hossler and Gallagher suggested. For example, the students emphasized the steps of sifting through promotional materials, conducting searches on the Internet, and attending campus visits, all of which reflect the Search phase. In addition, the final two steps the students identified, completing admissions applications and making the final college choice, relate to Hossler and Gallagher's final step, Choice.



The second research question revolved around the significant factors that influenced the student's college choice, and it was broken into two areas: individual factors (student characteristics, significant others, and student search activities) and organizational factors (school characteristics and college and university courtship activities). The last three themes in my analysis address the individual and organizational factors and reflect the stronger emphasis the students placed on several of the organizational factors, rather than the individual factors.

In terms of the individual factors, the students did not recognize significant others as being instrumental in their college choice. Many of them talked about their college choice being a very independent decision with little input from parents, guidance counselors, teachers, and friends. However, the students' own characteristics, such as being independent, high-achieving, and web-savvy, appear to have influenced their college choice. Furthermore, the students' search activities (i.e., sifting through promotional materials, investigating schools on the Internet, and conducting campus visits) also served to influence their final college selection.

As for the organizational factors, such as the cost, location/proximity, campus environment, quality of program, and communication, the students recognized these as being significant in their college decision. For example, continuous communication was reported to be influential in the students' college choice. This communication started when the student received promotional materials from a school, continued when the student conducted their own investigation of the school by visiting the school's website, and persisted when the student made a college visit. The students also focused on the organizational factors when they revealed how practical they were in making their college choice by considering

cost/financial aid and location/proximity. All seven participants recognized these two organizational factors as influencing their college choice. Finally, the campus environment and quality of program were two additional organizational factors these students identified as influencing their college choice. All of the students rated the quality of program as an influential factor, commenting that the reason people go to college is to receive a high-quality education. However, that factor did not stand alone. Many of the students also highlighted the need to feel comfortable in the campus environment, stressing the need for a diverse social climate with a variety of activities. In fact, the students expressed the need for a balance between both the intellectual and social environments. For example, a school could be ranked number one in the program of study the student wishes to pursue, but if the student did not feel comfortable in the campus environment then he/she would not choose to attend that school. This finding reflects the influence organizational factors had on the college selection of these students.

### *Presuppositions Revisited*

During the preliminary stages of this research I had identified three presuppositions about this study. The first was that the financial aid package would be one of the most influential factors for these students because many students of color originate from lower-income families, and therefore, require substantial financial aid awards in order to consider a school. I found this presupposition to be inaccurate. It was true that financial aid was important to my participants; however, it was not because they came from families with limited resources. In fact, many of these students reported coming from middle-class households. Financial aid was recognized as a factor for them because they wanted to keep the amount of money they had to pay back after completing their degree at a minimal level.

The second presupposition was that these students would choose an institution based on the quality of the program and reputation because securing a full-time position after school is of great concern. Again, the students in this study reinforced the idea that quality of program and reputation were important factors; however, not for the reason I had originally thought. The students did not talk about the end result being employment. In fact, what many of them discussed was that they are going to college to earn an education so they wanted that education to be as high quality as possible. I would not suggest that securing full-time employment is not something students consider, but none of them addressed it during our interviews.

The third presupposition I had when entering this study was that the type of institution (i.e., predominantly White institution, historically Black college or university, or Hispanic serving institution) would impact the decision of these students. For the most part, the students in this study were not concerned with the amount of diversity on a campus. Only one student, Carlos, admitted to conducting his search with the requirement that the school have a specific racial/ethnic minority student population. Many of the other students reported not being concerned with racial/ethnic diversity at the schools. I believe this was true for this study because six of my seven respondents were multiracial and appeared to have relatively low race salience. Therefore, attending a specific type of institution was not of great concern for them.

Now that the conclusions of the study have been examined by revisiting the research questions and presuppositions, I will discuss the implications for practice that I offer to higher education institutions.

### Practice Implications

From the analysis of this study, it became apparent that there are many implications for practice that need to be addressed. First of all, colleges and universities should not underestimate the value of a letter or other forms of promotional materials. Many of the students in this study remembered that letter or brochure being the first way they learned about a specific school. If institutions move away from such recruitment activities, they may be losing the opportunity to even be considered in the choice set of many students.

The second implication revolves around our society's move to more technological means of communication. Although students are generally familiar with this technology, they still identify the need for basic information. Therefore, while offering their general information to students in a new, high-tech fashion, schools must insure that students can find everything they want to know. This is not a simple task, but it is becoming ever so important during this technology age. For example, several of the students mentioned the desire to search college websites that were user-friendly with pertinent information easy to find. However, as Diana mentioned, she enjoyed the interactive components websites offered, as well as other media institutions were using, such as CDs and DVDs.

The third implication is to recognize the importance of the campus visit in the decision-making of students. As Michael commented, the campus visit is like the test drive of a new vehicle. Schools must offer a campus visit that is relatively smooth so the students do not experience too many bumps along the way. To help insure this, colleges must make sure the entire professional and student staff are aware of the impact they have on the college decision; reinforcing the importance that the admissions staff be at their best during any

student's college visit. In addition, colleges must be sure their facilities and grounds are well maintained and offer a positive impression to visitors.

Although students are reporting more independence in their college choice, it is important not to neglect the parents' role in this decision. They are still involved in this process; however, it may just be to a lesser degree than once thought. As Stamats (2002) suggested, "Take advantage of any opportunity to encourage and facilitate parent-to-parent contact" (n.p.). This could include having the parents of prospective students visit with satisfied parents of current students in order to gain a genuine perspective from others who have been through the same experience of sending their child off to college. This beneficial interaction could help place a school over another school in the end.

In the fifth implication I recognize that it is no secret that tuition has been on the increase for over five years now. As prices continue to rise, students are remaining practical in their college choice. This does not mean that tuition must be kept unreasonably low to the point that schools cannot afford to keep their doors open. It does, however, mean that schools must offer a competitive financial aid package with as many scholarships and grants as possible, while loans are kept to a minimal amount. Students look at the bottom line figure, which is the difference between the tuition and the financial aid offered, and base their decision on that amount.

Finally, the last implication addresses the importance students place on both the educational and social aspects of a specific college. The students in this study are attending college in order to receive a strong education. Institutions must be sure to showcase the quality of the academic programs they offer. However, institutions must not ignore the social life of students. The students recognize that they will be living in that environment for at

least the next four years and they need to be reassured that they will feel comfortable and fit in well at the school they select.

The previous implications suggest that there are several factors higher education institutions must consider as they recruit high-ability, engineering students of color. The following section outlines and offers recommendations for future research in this area of study.

#### Recommendations for Future Research

This study included a small sample size and utilized a qualitative approach in order to identify potential factors to consider in college decisions; however, further research would need to be conducted to validate the findings. I would encourage others to replicate this study to either support or reject the findings reported here.

The college choice of a very specific kind of student: high-ability, engineering, students of color, was explored in this study. It would be important and beneficial to increase the depth of understanding of the college selection process and factors found to be significant in influencing the choice of other student populations. For example, it might be helpful if this study was replicated using lower-ability, engineering, students of color.

Prior to commencing my interviews, I was not aware that six out of my seven participants were multiracial. The college choice experiences of these students, therefore, could drastically differ from racial/ethnic minority students who do not identify as multiracial. As a result, it would be beneficial to study the college choice of non-multiracial students of color to explore if their college choice experience reflects or contradicts that which was identified by the students who participated in this study.

Furthermore, this current study combined two different racial/ethnic groups, African American and Latino, together. The analysis does not distinguish between the two groups; therefore, it would be helpful to investigate if differences exist in students' college choice process and factors among diverse racial/ethnic minority groups. In addition, further research should be conducted on non-racial/ethnic minority students in order to explore if their college choice experience mirrors or challenges the experiences identified by the students of color who participated in this study.

I chose to include both men and women in the current study; however, I did not conduct any analysis separating the two. Another potential area for future research would be to investigate the college choice process of women versus men who plan to study engineering. Engineering is still a male dominated field; therefore, I believe, it is important to know what the process is for women as compared to men and explore the factors that significantly affect the college decisions of both genders.

Finally, since a vast majority of previous research on college choice utilized quantitative approaches, it is important to encourage future research related to college choice be conducted using qualitative methods. This should be done for students with various backgrounds to gain a deeper understanding of their college choice process and the factors that influence their decision.

Another very important research area that needs to be explored is how to properly assess recruitment programs. This assessment should include information from both the students who attend the programs, as well as the parents of these students. Accurately measuring these programs could be a challenge, but would be of great value to institutions who host recruitment programs by informing them on the success of the program in

achieving its goals and notifying the coordinator(s) of needed change. This assessment should be conducted on a regular basis in order to continually evaluate the effectiveness of the program.

### Personal Reflection

I have now reached the end of this research, and I find it important to reflect upon my own experience as the researcher in this study. Conducting this research was definitely a journey filled with educational learning and growth, as well as personal learning and growth. The educational learning and growth included the researcher skills I gained knowledge of by simply conducting this study: writing a research proposal, developing interview questions, conducting in-depth interviews, transcribing interview tapes, maintaining reflexive and methodological journals, conducting analysis, developing and supporting themes, and writing up the results. This is not an inclusive list of all of the components that are involved in the research process, but offers a sampling of the vast array of information and skills I learned throughout this process. In addition to the research knowledge I gained, I also learned a great deal about the college choice process and factors that have been found to be significant in the final college choice of students. All of this information together has increased my general educational knowledge.

The personal growth and development I experienced while journeying through this process has been quite rewarding. I developed better listening skills as I conducted 21 total interviews. I achieved a deeper understanding of individuals who identify as members of a racial/ethnic group other than White. I enhanced my organizational skills in order to keep track of the hundreds of pages of data that were collected throughout this process. My analytical skills were sharpened in order to make sense of the pages upon pages of



transcripts. Finally, I was awarded the opportunity to develop closer relationships with the students who participated in this study. All of these various components served to improve my personal being.

Overall, I found that conducting this study was a challenging; yet, very rewarding experience. The challenges arose whenever I entered into the next phase of the research. I would complete one step, such as conducting all the interviews, and then I would find it difficult to begin the next step, which in this example would be to do the analysis and writing of findings. Although conducting a research project is a demanding experience, when all is said and done and the end of the project is reached, the sense of accomplishment I feel is amazing and has made this experience one I will not soon forget.

## APPENDIX A: EMAIL TO POTENTIAL PARTICIPANTS

Hello! I hope you had a successful first semester! It is hard to believe that it has been about a year since we met at Preview Day 2003. As you may remember, I am working on completing my master's program. I just finished all of my coursework and must now focus my attention on my thesis. That brings me to why I am contacting you. I wanted to let you know about some really important research that I am conducting for my thesis. The purpose of my study is to explore and better understand the process and factors used in the college decision-making of students of color studying engineering. This study will focus on the process freshmen engineering students used in making their college choice. In addition, this study will examine the primary factors that influenced the final college choice of the students. The idea is to find out what the experience is like and what factors are used when students of color are choosing an institution to attend. This study is in no way related to your participation of Preview Day 2003. The reason I would like you to participate in this study is because you meet all of the criteria I have specified and I believe your college choice experience could be of value to this research. Your information will be entirely confidential, and your participation will require only a little of your time over the next two months. I would like to ask you to consider participating, as I am hoping to get a representation of students who chose to attend various institutions. Please read the announcement below, and if you have questions, call or email me. If you are interested, just email me back to let me know. I think that this is really important research and I hope that you are willing to help me with it.

Thank you. I wish you great success this semester!

~Jennifer

### Research Study on the Process and Factors Used in the College Choice for Engineering Students of Color

You are invited to participate in a study focused on learning the process and factors used in the college choice of engineering students of color. I am particularly interested in the process used in achieving your final college choice and the factors that were significant in influencing this decision.

Your participation will help me to better understand the process students of color go through while making their college choice. In addition, I will better understand the factors that are important to students of color as they choose which college to attend.

The study will consist of three interviews lasting approximately 90-minutes each. For those of you who are attending an institution other than Iowa State, the interviews will be conducted over the phone. The first interview will focus on your background and the context of your college choice experience. The second will specifically examine your college choice experience. The final interview will serve to reflect on the first two interviews and make

meaning of our discussions. All information you provide will be confidential. To ensure your confidentiality, pseudonyms will be used to identify any comments that you might make.

If you are interested in participating in this study or would like further information, please contact me: Jennifer (Esdohr) Assadi, Graduate Student, Higher Education, Iowa State University, 154 University Village Apt. H, Ames, IA 50010, (515)572-4629, or [jlesdohr@iastate.edu](mailto:jlesdohr@iastate.edu).

**APPENDIX B: INTERVIEW QUESTIONS**

## Interview 1: Context

1. We'll start by gaining an understanding of your home background and family. Where are you from?
2. How large is your family?
3. Whom does it consist of?
4. What do your parents do for a living?
5. Did they attend college? (degrees earned? Where?)
6. If you have siblings, are they older or younger?
7. Have any of them attended college?
8. Tell me a little bit about the community in which you were raised.
9. What kinds of things were you involved within your community? (Talk about specific examples)
10. Now let's move more into your educational experiences. What was your high school experience like? (rigor of coursework, strength of math and science, participation in extra-curricular activities, racial diversity of class and teachers)
11. How would you describe your academic preparedness for college?
12. Please talk a little bit about when you realized that you were going to attend college – how old were you? Who introduced you to thinking about it?
13. Share with me who was particularly supportive of you attending college? (provide examples of how they were supportive/not supportive)
14. When was the first time you visited a college? Will you please describe your visit to me?

## Interview 2: Experience

1. When did you begin to seriously start considering which colleges you might want to attend?
2. How many were you seriously considering attending?
3. Can you list them for me? (this will tell me the variety of college quality and variety of types of colleges)
4. Please describe to me the process you used in making your college choice. Please start from when you began thinking about attending college up until the time you made the final decision (indicate the time frame as well, sophomore year I did this, junior year I did this, fall of my senior year I did this, etc).
5. Were you aware of the cost of attendance at each institution?
6. How many institutions did you apply to attend?
7. What was your perception of the quality of the institutions that were in your choice set?
8. What types of "courtship" (merit awards and college communication strategies) behaviors were institutions doing?
9. How do you feel about the treatment you received from schools during the process of selecting a school?

10. Can you please list the factors you believe were important in influencing your final college choice and talk about each one in detail?
11. How important, if at all, was visiting the campus you were considering attending?
12. What role did your parents have in your final college choice?

Interview 3: Follow-up and member checking

1. This interview involved additional exploration of information offered in the first two interviews that was not clear or that needed more elaboration.
2. Students were presented with preliminary themes from the data analysis and were asked to verify that these themes were an accurate representation of their background and experiences. They had an opportunity to correct any misinterpretation or add additional information.

## APPENDIX C: INFORMED CONSENT DOCUMENT

**Title of Study:** Making the college choice: A phenomenological study of high-ability engineering students of color

**Investigators:** Jennifer L. Assadi, B.S.  
Nancy J. Evans, B.A., M.Ed., M.F.A., Ph.D.

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

### INTRODUCTION

The purpose of this study is to explore and better understand the process and factors used in the college decision-making for students of color studying engineering. This study will focus on the process freshmen engineering students used in making their college choice. In addition, this study will examine the primary factors that influenced the final college choice of the students. You are being invited to participate in this study because you are an engineering student of color who has experienced the college choice process.

### DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will last for two months and will involve three, 90 minute, in-depth interviews. During the study you may expect the following study procedures to be followed. During the first interview, you will be asked a series of questions to gain a context for understanding your college choice experience. The second interview will focus on the process you used in making your college choice and the primary factors that impacted your final decision. The third interview will allow me to ask follow-up questions for clarification and allow you to review and comment on the tentative conclusions.

All interviews will be audio taped and transcribed to allow me to study them. To maintain your anonymity, you will be asked to provide a pseudonym. No documents (tapes or transcripts) will contain your actual name or identifying information. The tapes will be erased as soon as data have been analyzed and the results written up. Transcriptions will be kept in a personal computer file that is password protected. During the interviews, you may skip any question that you do not wish to answer or that makes you feel uncomfortable.

### RISKS

There are no foreseeable risks at this time from participating in this study.

## **BENEFITS**

If you decide to participate in this study there will be no direct benefit to you. It is hoped that the information gained in this study will benefit society by providing valuable insight into the college choice experience of engineering students of color.

## **COSTS AND COMPENSATION**

You will not have any costs from participating in this study You will not be compensated for participating in this study.

## **PARTICIPANT RIGHTS**

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide to not participate in the study or leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

## **CONFIDENTIALITY**

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken. I will be the only person who has access to the data. It will be kept in a locked file cabinet in my home. As for computer files, they will be located on my home computer, which is password protected to prevent others from viewing my files. Tapes and transcripts will have a label to identify you. A document with participant names and labels will be kept separate from the tapes and transcripts. Participants' names will never be associated with a piece of data. I plan to keep the data until 02/01/05 in order for me to write the results and have them reviewed. If the results are published, your identity will remain confidential.

## **QUESTIONS OR PROBLEMS**

You are encouraged to ask questions at any time during this study. For further information about the study contact Jennifer L. (Esdohr) Assadi, (515)572-4629, [jlesdohr@iastate.edu](mailto:jlesdohr@iastate.edu) or Dr. Nancy J. Evans, Professor, Educational Leadership and Policy Studies, (515)294-7113, [nevans@iastate.edu](mailto:nevans@iastate.edu). If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 2810 Beardshear Hall, (515) 294-4566; [austingr@iastate.edu](mailto:austingr@iastate.edu) or the Research Compliance Officer, Office of Research Compliance, 2810 Beardshear Hall, (515) 294-3115; [dament@iastate.edu](mailto:dament@iastate.edu)

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**SUBJECT SIGNATURE**

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Subject's Name (printed) \_\_\_\_\_

\_\_\_\_\_  
(Subject's Signature)

\_\_\_\_\_  
(Date)

**INVESTIGATOR STATEMENT**

I certify that the participant has been given adequate time to read and learn about the study and all of their questions have been answered. It is my opinion that the participant understands the purpose, risks, benefits and the procedures that will be followed in this study and has voluntarily agreed to participate.

\_\_\_\_\_  
(Signature of Person Obtaining  
Informed Consent)

\_\_\_\_\_  
(Date)



**APPENDIX D: PARTICIPANTS' COLLEGE CHOICE FACTORS**

<b>Factor</b>	<b>Camila</b>	<b>Carlos</b>	<b>Diana</b>	<b>Green</b>	<b>James</b>	<b>Michael</b>	<b>Shirley</b>
<b>Intellectual Emphasis</b>							
Quality of Faculty				6			
Reputation/Ranking			2	8			5
Quality of Program/ Curriculum	4	2	2	3	5	3	1
Availability of Curriculum	4	6		1	5		3
Intellectual Environment		1					
Size of Institution				5		6	
Quality of Facilities		7		2		4	
<b>Practicality</b>							
Location/Proximity	1	8	7	10	3	1	7
Cost			3	9	2		4
Financial Aid/ Scholarships	3	9	3	9	1	2	4
<b>Advice of Others</b>							
Parents/Relatives							5
High School Counselor/Teachers							5
Peers/Friends							5
<b>Social Emphasis</b>							
Social Climate	5		4	4		5	2
Activities	6	5		3	6		
Housing	7			7			
Religion/Spirituality			1				
Diversity <sup>3</sup>		4	5				2
<b>Communication</b>							
Promotional Materials		3	6		4		
Campus Visit	2	3					6

<sup>3</sup> Diversity is inclusive of racial/ethnic diversity, as well as diversity of background, SES, religion, etc.

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