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The Use of Cognitive Heuristics in College Choice

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THE USE OF COGNITIVE HEURISTICS IN COLLEGE CHOICE

by

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VITA

The author, Kerry Elizabeth Smith, is the daughter of David and Marjorie Smith. She was born February 1, 1960.

Her elementary education was obtained in the public schools of Downers Grove, Illinois. Her secondary education was completed in 1978 at Downers Grove North High School, Downers Grove, Illinois.

Ms. Smith attended North Central College in Naperville, Illinois where she received a Bachelor of Arts in psychology in April, 1982. While attending North Central College, she was a member of the North Central College Honor Society, and was inducted into Psi Chi, the psychology honor society. In 1981, she became a student member of the American Psychological Association.

In August 1982, Ms. Smith was granted an assistantship in applied social psychology at Loyola University of Chicago, enabling her to complete the Master of Arts in 1985. She began working in the Office of Research and Planning at Oakton College in January, 1985 where she is currently Coordinator of Research and Planning. In September, 1987 she was awarded a University Fellowship from Loyola University of Chicago to support her dissertation research.

Ms. Smith has authored and presented several papers (co-authored with Trudy Bers) on the topics of college choice and research methods in institutional research.

TABLES OF CONTENTS

Page

LIST OF TABLES

LIST OF FIGURES

CONTENTS FOR APPENDICES

INTRODUCTION

Declining enrollments in higher education and a rapidly decreasing number of high school students have increased interest in learning more about students and the factors that influence their college choices. Colleges are looking more closely at the pool of potential students and are beginning to design marketing strategies to attract qualified students. Related to the interest in attracting new students is the increased concern for retaining current students. The desire to effectively market colleges and actively manage enrollments has served as the catalyst for much research. Most of the studies have been utilitarian in purpose. They were designed to help institutions of higher education better understand, and hence communicate with, their "markets." Two major themes emerging from the research in this area are: 1) the relationship between student characteristics and college choice, and 2) the stages of decision-making leading to a choice of college. Neither of the two areas of research has been without problems, nor have they been wholly satisfactory in their explanations of students' college choices.

In looking at college decision making, researchers have focused on normative (i.e., how decisions "should" be made if people were

perfectly rational) rather than descriptive (i.e., how decisions are actually made) models of decision-making. Most researchers have developed multi-stage models that describe the behaviors involved in choice (e.g., requesting information, filling out applications). They have not, however, examined the decision processes that preceded these behaviors. Although hypotheses about the stages of the college decision have been developed, the cognitive processes (e.g., information selection, retrieval and combination) underlying the stages of choice have been overlooked. Relevant psychological research on decision-making, specifically the role of cognitive heuristics in judgment and choice, has not been considered.

Hossler (1985) indicates that the cognitive processes which underlie choice are an important consideration in college decision-making, worthy of further research. He suggests that future research on college choice should include more theoretical constructs. The understanding of college choice, therefore, might be enriched by a psychological perspective that provides a fuller conceptualization of choice and offers possible explanations for how information about colleges is selected (e.g., based on the availability of information in the environment and one's memory) and applied (e.g., judgments of representativeness or how relevant the information is to oneself) to produce a choice.

With respect to research on student characteristics, most

demographic information, as well as information about the colleges a student considers, has been gathered from standardized admissions tests. The SAT, for example, includes the Student Demographic Questionnaire along with request forms for having scores sent to various colleges. The former provides student demographic information, the latter is used to define the choice set - those institutions to which a student is actively considering application. The problem with such data is that they are relevant only for the population of students who take standardized admissions tests. Usually this includes only those students who enter or consider four-year colleges (that require tests for admissions), and excludes those who consider and enter two-year colleges (that generally have open admissions). This misrepresents the actual population of college students because it excludes a viable population of students who begin, continue, or supplement their educations at two-year colleges or who do not attend college immediately after high school but defer their college education until later in their adult lives (i.e., age 25 or older).

Further study on the college choice processes of two-year college students and non-traditionally aged students has been called for by a number of researchers. With respect to the two-year college students, Hossler (1985) points out that there is preliminary evidence to suggest that students who enter two-year colleges may be different from those who enter four-year colleges, but that such

differences have not been studied in any depth. Jackson (1978) proposes that the process of choice may vary among students. For some students the initial decision to attend college is a matter of which college to attend, while for others the choice is whether to go to college or not. Finally, Litten (1982) insists that specifying how the selection process differs for various types of students is essential to developing a complete understanding of the choice process.

Existing research also does not consider the non-traditionally aged student, either in the formulation of conceptualizations of choice or the determination of student characteristics that influence choice. Student characteristics such as age, sex, and parental income - while important for younger students - do not appear crucial in influencing the educational choices of non-traditionally aged students (Anderson & Darkenwald, 1979). Aslanian & Brickell (1981) suggest that older students return to college because of "life transitions" (e.g., children leaving home, divorce), but they do not indicate how students select a college once the decision to attend has been made. Learning more about older students is of special concern because of the large number who are entering institutions of higher education. Haponski & McCabe (1982) estimate that in 1988 the percentage of adults 25 years of age and older in higher education will be 44%. Despite their increased participation in higher

education, very little is known about two-year college students or non-traditionally aged students with respect to their decision-making and choice of college.

Because of the lack of knowledge about community college and non-traditional students, there is room to expand the current research on college decision making to include these populations. Such research should also incorporate relevant variables from psychological decision research (i.e., cognitive heuristics) in an effort to explain and/or predict college choice more fully.

With the suggested expansion of models of college choice and the need to conduct research with the diverse population of students in mind, the following provides a review of the literature on decision-making and college choice, and cognitive heuristics. On the basis of this review, a research project for integrating these areas to further investigate college decision making will be explained.

REVIEW OF RELATED LITERATURE

College Choice

Most studies of college choice focus on one of two areas: student characteristics or models of college choice. Research on student characteristics has focused on the identification of demographic variables and other student-related factors related to or predictive of choice. Research on the process of choice has centered on the development of multi-stage models that describe decision-making and choice.

Student Characteristics

In terms of student characteristics, Hossler (1984) and others (Chapman, 1984; Litten, 1982; Zemsky & Oedel, 1983) have identified several that appear to be influential in the college choice process. Typically these fall into two categories, stable and unstable characteristics. The relatively stable characteristics include the student's academic ability (as measured by class rank, GPA, test scores), socioeconomic status (parental income and education level), significant others (e.g., parental encouragement, friends also attending college), sex, race, residence characteristics (nearness to institutions of higher education, urban/rural), and high school characteristics (quality, size). These variables can be thought of as stable because they cannot be

altered or swayed (i.e., by recruitment literature). Less stable or unstable variables, on the other hand, are more malleable and subject to change. These include factors such as career plans, expectations of college life, and future aspirations. Both stable and unstable variables seem highly related to college choice.

Most research on students' characteristics proposes that choice is a product of the interaction of student characteristics and college characteristics (e.g., size, location, cost). This is based on the assumption that the kind of person a student is will influence his/her choice of college as well as the kind of college that will select him/her. For example, high ability students will have a wider range of choices and will be acceptable to more colleges than will low ability students. Though most research lists a variety of college characteristics that students are believed to consider, very little has been done to document the characteristics students actually consider. Much more information is available concerning what colleges look for in a student than vice versa.

The relationship between stable demographic variables and college choice has been fairly well documented. However, the relationship between less stable factors, such as students' expectations of college, and college choice is less clear. Most research reveals that stereotypes of college life or unrealistic expectations exist but does not make a clear connection between them and college choice. Hossler (1984) indicates that "evidence

suggests that most students do not have a clear notion of what to expect from a university and therefore make poorly informed decisions." Stern (1965) agrees, stating that students base decisions on stereotypes and that accurate information about college and college life is often ignored or distorted. From this he concludes that many students enter college with unrealistic expectations. Chapman & Baranowski (1977) find that students who have had the experience of taking a college level course in high school had more realistic expectations of college, while those without similar experience had highly unrealistic expectations, particularly about the intellectual rigor of college and the level of competition for grades. Taken together, these studies suggest that many students may not have a clear sense of what college life will be like and approach this new situation with false or unclear expectations and unrealistic stereotypes. The research does not indicate, however, on what information expectations were based or how much weight they were given in determining choice. Discovering how impressions/expectations are formed, on what information they are based, and how they affect students' judgments and choices is very important for future research on college choice.

Choice Process

Although student characteristics and perceptions of college have been a major focus in the literature, attention has also been directed towards the process of college choice. In general, studies

view college choice as a multi-stage process (Hossler, 1985; Jackson, 1982; Litten, 1982). This is, in part, influenced by the perspective of college administrators who view college selection and student recruitment as consisting of several stages. From this standpoint, the choice process begins with an inquiry pool of interested students, and is followed by the stages of application, acceptance, yield (i.e., those accepted who attend) and persistence (i.e., continued attendance). To some extent this focus has influenced the way studies have conceptualized college choice (T.H. Bers, personal communication, April, 1986).

Most models propose that college selection begins with an initial phase in which the student decides to "go to college" or at least investigate the possibility. Following this initial choice is a search for information about colleges and a narrowing down of colleges under consideration into a "choice set" (i.e., colleges under consideration for application). Chapman (1984) sees this second stage as a "searching for attributes and values that characterize college alternatives and/or learning about and identifying the 'right' attributes to consider." In other words, applicants decide what they are looking for in a college and begin making decisions about the kinds of features that are important to them. The choice process concludes with a final evaluation of colleges in the choice set and results in the selection of a college.

Jackson's (1982) model is one that follows this process fairly closely. Jackson conceptualizes the college choice process as consisting of three phases: preference, exclusion, and evaluation. A preference for certain colleges develops as the result of the "stable" variables previously discussed, e.g., family background, academic achievement, students' levels of aspiration. During the exclusion phase, a choice set is developed by weighing the preferences for certain college characteristics developed in stage one (e.g., small size, active student government, coed dorms) against actual institutions. In the final phase, evaluation, a rating scheme is applied to the choice set. This is where concerns about costs, programs, and aspirations are paramount.

Hossler's (1985) model is somewhat similar to Jackson's. However, Hossler conceptualizes the process of college selection as a succession of choices with ever decreasing alternatives. He likens the process to a funnel, broad at the top (i.e., many possible choices) and narrow at the bottom (i.e., a final selection). His model also consists of three phases: predisposition, search, and choice. In the first phase, certain student characteristics (e.g., ability, SES) create a predisposition for college attendance. That is, because of a variety of factors including ability and finance, some students are more likely to be college bound than others. Search is influenced by college

characteristics, student values, and students' search activities. The outcome of this phase is the choice set. The final phase, choice, occurs when a final decision about which college to attend is made. Unlike other researchers, Hossler allows for variation in the way searches are conducted and implies that different strategies, all other things being equal, may lead to different choices.

The models of college choice discussed so far seem to suggest that students engage in a rational, orderly decision-making process. Several studies provide evidence to suggest that students follow a fairly predictable pattern in their construction of choice sets (Litten, Sullivan, & Brodigan, 1983; Tierney, 1980; Zemsky & Oedel, 1983). There is some question, however, about the adequacy of such models in explaining the college choice process. Litten (1982) asserts that models such as those discussed above are too general in their attempts to describe the typical choice process. Specifically, models developed by Jackson and others do not discuss how alternatives and attributes are evaluated, how a rating scheme is developed and applied, or the role of student expectations in the development of choice. Chapman (1981) proposes that a more accurate model of college choice is one that recognizes the influence of student expectations on college choice. Chapman's model is a departure from other models discussed previously and suggests that student characteristics (SES and ability) combined with external

influences (parents'/teachers' advice, fixed and fluid college characteristics) produce a generalized expectation of college life. He argues that it is this expectation that strongly influences choice. This model recognizes that choice may be influenced by more than "hard evidence" and that information about colleges is processed and combined to produce a general feeling or expectation about a college. Determining how this conceptualization is developed (e.g., the information used) and what it consists of appears to be important if stereotypes and/or expectations are influential in choice.

Given Chapman's (1981) conclusion and the conflicting evidence as to the rationality of students' decision making, it appears profitable to investigate the factors in decision making, other than demographics, that influence choice. It is apparent that background factors such as ability and finance will limit a choice set to those colleges a student can afford and those to which s/he has been accepted. Beyond these practical limitations, it is also worth knowing what portion of the decision might be based on an expectation or stereotype, and on what information this stereotype is based. Theories about cognitive heuristics address such issues and provide insight into how information is selected, processed, and applied in choice situations. A discussion of heuristics and how they relate to college choice might prove helpful at this point.

Cognitive Heuristics

As Sherman & Corty (1985) point out, there are often problems with formal models of judgment and choice. In particular, formal models don't always describe how people really go about making decisions, and they are not concerned with the intervening cognitive processes underlying judgment (Wallsten, 1980). Although the authors did not address their remarks to models of college choice specifically, their criticisms seem applicable to this area. Incorporating what is known about cognitive heuristics into models of college decision making may prove useful in discovering more about the college choice process.

Cognitive heuristics are simple strategies or "rules of thumb" that people use when making judgments (Nisbett & Ross, 1980). They are most frequently used in situations involving complex decisions such as estimating the likelihood or frequency of an uncertain event's occurrence (e.g., success in college, chances of admission.) Cognitive heuristics are, however, applicable to a wide range of situations (Sherman & Corty, 1985). The main advantage of using cognitive heuristics is that they turn complex cognitive tasks into much simpler, less taxing ones. They also allow decision makers to focus on limited sets of information to arrive at decisions, circumventing the need for a protracted search of all available information.

A major reason cognitive heuristics are employed in judgments

is the limited capacity of persons for processing information, particularly if it is complex. The college choice process may be viewed as a complex decision. In choosing a college, persons make two kinds of judgments that Hogarth (1980) considers common to almost all choice situations: value judgments and predictions. For example, when a person decides s/he prefers Northwestern to Loyola s/he is making a value judgment. A typical way of arriving at this conclusion, discussed earlier (Chapman, 1984), is to select a number of important attributes (e.g., cost, location, type of college) and to compare colleges (i.e., alternatives) across attributes. Depending both on the number of attributes important to the student and the number of alternatives considered, the amount of information required for making this decision may be quite large. Even if a relatively small number of colleges and attributes are considered, the task is still difficult and complex.

It is generally accepted that the selection of a college involves judgments of value. Hossler's (1985) model of college choice recognizes that value judgments are part of the choice process. In addition to value judgments, the selection of a college also involves predictive judgments. When selecting a college, a student not only must judge its value, s/he must also assess his/her likelihood of success at that college, probable satisfaction with college life, and/or the possibility of achieving important goals at the college. Like value judgments, predictions require cognitive

effort as well as a rather complex assessment of self and of the institutions. Although he does not make reference to them, predictions may come into play in Chapman's (1981) model when students form expectations of college life. That is, part of a student's expectations about college may involve a prediction about how college life will be.

In complex judgment situations such as college choice, people are able to effectively process only a limited amount of information - certainly not all of the information available. Hogarth (1980) suggests that people experience information processing difficulty at several points: 1) they attend to information selectively rather than conducting exhaustive searches, 2) they do not pay attention to or tend to discount some pieces of information, and 3) they have limited capacity to retrieve and process information that has been gathered. This suggests that students' judgments may not be as "model" (i.e., exhaustive, rational, pre-planned) as models of college choice propose. Because of the complexity of the college choice decision, prospective students may not be able to handle all the information available to them necessary for a rational, thoroughly researched choice. The difficulty and complexity of the task is perhaps one reason cognitive heuristics may come into play in the college choice process.

Two cognitive heuristics, availability (and its extension - simulation) and representativeness, may be relevant in explaining

college choice. Availability and simulation are important because of their implications for what kind of information will be used in the college decision. Representativeness is relevant for its suggestions about how information will be applied.

Availability

As was mentioned earlier, cognitive heuristics operate to reduce the complexity of judgment situations and the amount of effort required to make a judgment by highlighting or focusing attention on certain pieces of information and ignoring or discounting others. When the availability heuristic is used, certain types of information will be chosen, retained, and applied in choice situations more frequently than others. In college choice research, not much is known about what sources and types of information carry the most weight in a student's college decision. Sources may range from close friends, family and college counselors to brochures and catalogs. Information may be in the form of a written description, picture, or anecdote. The availability heuristic predicts that people will use the information that is most easily recalled or readily "available" to them as the basis of judgment (Tversky & Kahneman, 1973).

There are a number of factors that may influence information availability. Tversky & Kahneman (1973) point out, however, that factors which heighten availability do not actually increase

frequency or probability, although very frequent events are likely to be more available. Research has demonstrated that vivid or salient information, information with which one has direct or concrete experience, and confirmatory information are typically most available or easily retrieved (Sherman & Corty, 1985; Taylor & Thompson, 1982).

Sherman & Corty (1985) argue that an event's availability is related to its vividness. Vividness refers to the extent to which an example or piece of information creates a lasting image in one's mind. Vivid information, according to Nisbett & Ross (1980) is emotionally interesting, concrete (i.e., containing detail and specificity), and is proximate in a sensory, temporal or spatial way. It should be noted that concreteness is sometimes referred to separately, not as a criteria for vividness. This is not an issue of concern, as it is believed to increase availability, whether separately or in combination with emotional interest and proximity.

In general, more vivid information is believed to be more memorable and easily retrieved. For example, research by Lichtenstein, Slovic, Fischoff, Layman and Coombs (1978) revealed that many persons had misconceptions about the frequency of certain causes of death. Subjects in their experiment tended to believe that unusually vivid and/or more frequently publicized causes of death (e.g., car accidents) were more frequent than less vivid or less frequently reported causes (e.g., asthma) than was actually the

case. Reyes, Thompson, & Bower (1980) provide additional support for the notion that vivid examples are more available in memory and more frequently used in decision making. They found that in a simulated trial situation incidents that were highly vivid and descriptive (e.g., "he staggered across the floor, bumping the table and knocking over the guacamole onto the white shag carpet") were more easily remembered and had a greater effect on judgments of guilt or innocence than less vivid information.

In addition to or as a part of vividness, direct experiences or concrete examples may heighten information availability. Nisbett, Borgida, Crandall, & Reed (1976) find that individual cases, which are usually vivid and concrete, are often overused in making inferences while more highly informative data summaries are ignored. Hogarth (1980) illustrates this point by relating the story of the college professor who presents compelling statistical evidence to his class only to have it rebutted by a single case (e.g., "But I have a sister who..."). With respect to college students, Borgida & Nisbett (1977) found that face-to-face information from a student about a course had a bigger effect on course preference than did summaries of course evaluations. This suggests that, for example, the information that 75% of the entering freshman class at Pitzer College graduate and successfully find jobs may have little effect on decision making, while the story about the neighbor's daughter who went to the same college and is now a successful lawyer may have a tremendous effect on

a student's decision. The implication for college choice is that students are more likely to base judgments on or give more weight to an available example or anecdote than a written description in the college catalog. Research predicts that the anecdote will be more easily recalled.

Information salience is also related to availability. Wyer & Srull (1980) propose that frequently activated pieces of information and/or the "last activated" piece of information will be more easily recalled than information used infrequently or activated a long time ago. Their "storage bin" model proposes that memory works as a "last in, first out" system. Therefore, colleges with which one has frequent contact or that are brought to mind frequently by friends or family will be more available as choices.

Research also suggests that people are better at generating positive or confirming evidence than they are at generating negative or disconfirming evidence, the so-called "feature positive" effect (Newman, Wolff, & Hearst, 1980). For example, a student looking at a college will be more likely to look for examples of persons who have chosen to attend than those who did not so choose. Wells & Lindsay (1980) have demonstrated this effect in courtroom situations where non-identification by an eyewitness (i.e., "This is not the man") is not considered informative.

Application of the availability heuristic to college choice suggests that students are likely to make judgments based on

anecdotes or examples which are vivid or salient, with which they have had direct experience, or which confirm their opinions than they are to make judgments based on statistical information or "cold" facts. It is worth investigating whether contact with the college or college students, hearing stories about the college or observing examples of college life might have on decision making and how much weight these sources of information are given in the college decision.

Simulation

Kahneman & Tversky (1982a) have broadened the idea of availability to include what they refer to as simulation. Simulation refers to assessing an event's frequency or likelihood by the ease with which an event or scenario can be constructed. They argue that as a means of judging an event's likelihood people will construct a scenario connecting the present situation to the future event. An event is then judged likely or unlikely based on the perceived plausibility of the scenario and/or the ease with which it was produced. For college decisions this suggests that a student will choose a college based on the ease with which s/he can create a "going to college" scenario. As was true with availability, friends, siblings, or other family members and their examples may be sources from which scenarios are constructed.

Availability and/or simulation may be of special relevance to the two-year or community college student. Because community

colleges serve specific, limited, geographic areas, and students live in their permanent residences rather than temporary housing (i.e., dorms), current students must stay in the area and former students frequently remain. Thus, prospective students will have a wealth of examples or "ready-made" scenarios for attending the college. In addition, community colleges attempt to maintain high visibility, and thereby salience, with frequent mailing to community residents and press releases to local papers. Proximity to the college may also increase its salience. Using Wyer & Srull's model, this might mean that the community college is frequently activated or will often be the last activated college. In general, this suggests that community residents are likely to have a large pool of information about the college based both on vivid and salient examples, and possibly direct experience.

Representativeness

The representativeness heuristic refers to using judgments of similarity between a specific instance and an average or typical instance to assess probability - in this case, of success in or satisfaction with college (Kahneman & Tversky, 1974). That is, an event or person (e.g., Mary Richards, recent high school graduate) will be judged representative of a class of events or category (e.g., students at Loyola) based on perceived similarity between the instance and the category. As was discussed earlier, students are believed to hold stereotypes and expectations of colleges and use

them as a basis of judgment. Representativeness may help to explain how this judgment is made and on what information it is based. Student stereotypes might include expectations about what the typical or prototypical student at a college is like. From this stereotype students may make judgments about the degree to which they are similar to this person. A "match" or assessment that one is representative of an institution's population, e.g., students at Loyola, may then lead one to conclude than one's chances of success at that institution are high.

In the case of college choice, judgments of representativeness involve assessing similarity between oneself and the typical student at the specific college. Tversky (1977) characterizes this process as "feature matching." For example, a prospective student may identify features that define the typical student at Harvard. These features might include academic capability, age, and personality traits. The kinds of comparisons a student will make in attempting to determine similarity/dissimilarity, according to Tversky, are: "What do I have in common with the students at this college?," "What do the students at this college have that I do not?," and "What do I have that students at the college do not?" The salience of features may vary from student to student.

Just as availability may be affected by information characteristics, such as the vividness of a case or direct experience with the information, judgments of representativeness may

also be influenced by certain kinds of data. In particular, factors that may affect representativeness include overreliance on small samples and highly specific cases.

In making judgments of representativeness people typically rely on small samples of information that are perceived to be highly similar to a population. The sample may be taken as a valid indicator of probability, despite its size. Use of information in this manner is referred to as "belief in the law of small numbers" (Tversky & Kahneman, 1971). In college choice, this means that stereotypes and expectations are likely to be developed based on a few examples (e.g., of students) rather than a broad range. This may create a biased and unrealistic reference as Chapman & Baranowski (1977) suggest.

Highly specific cases, as well as small samples of data, are also likely to be used in judgments of representativeness. While specific cases appear highly representative of a particular population they may not be highly probable. Tversky & Kahneman's (1971) research has addressed this point. Subjects in their experiment assessed the probability of a fictitious person, "Linda", being both a bank teller and a feminist as greater than that of bank teller alone. The opposite is true. According to the laws of probability, conjunctive events (e.g., bank teller and feminist) are less probable than simple events (e.g., bank teller). It appears likely that students will seek and have more confidence in highly

detailed examples rather than global less specific ones, when looking for representative students or judging their own representativeness to a population of students.

Potential Problems with the Use of Heuristics

Heuristics are used because they simplify the task of making a decision. One way tasks are simplified is by focusing on certain pieces of information to the exclusion of others. There is a general problem with using cognitive heuristics in judgments of probability. Variables that make information about an event more available or representative do not similarly make that event more probable or frequent. College choice involves both a predictive judgment and a judgment of value. Biases in heuristics affect predictive judgments primarily, but the conclusions reached on the basis of such judgments (e.g., I will be more likely to succeed at Loyola than at DePaul...) have implications for value judgments as well (e.g., Therefore, I like Loyola more.)

The problem with availability is that ease of recall is independent of frequency of occurrence (Tversky & Kahneman, 1982). While large samples are more easily recalled and offer a good index of frequency, other factors unrelated to frequency may affect one's perceptions (e.g., salience, vividness, direct experience.) Just as highly available information may not be an appropriate or accurate indicator of probability, representative examples are not necessarily more probable nor does perceived similarity between oneself and a

successful prototype make success more probable. In making judgments, undue emphasis may be given to factors that affect representativeness but do not affect probability. This means that eventual success at college is not necessarily best predicted by perceived similarity to a successful student. Further, it should be noted that if a sample of information (generated by the availability heuristic) is biased in any way, judgments based on this information (e.g., representativeness) are likely to be similarly biased.

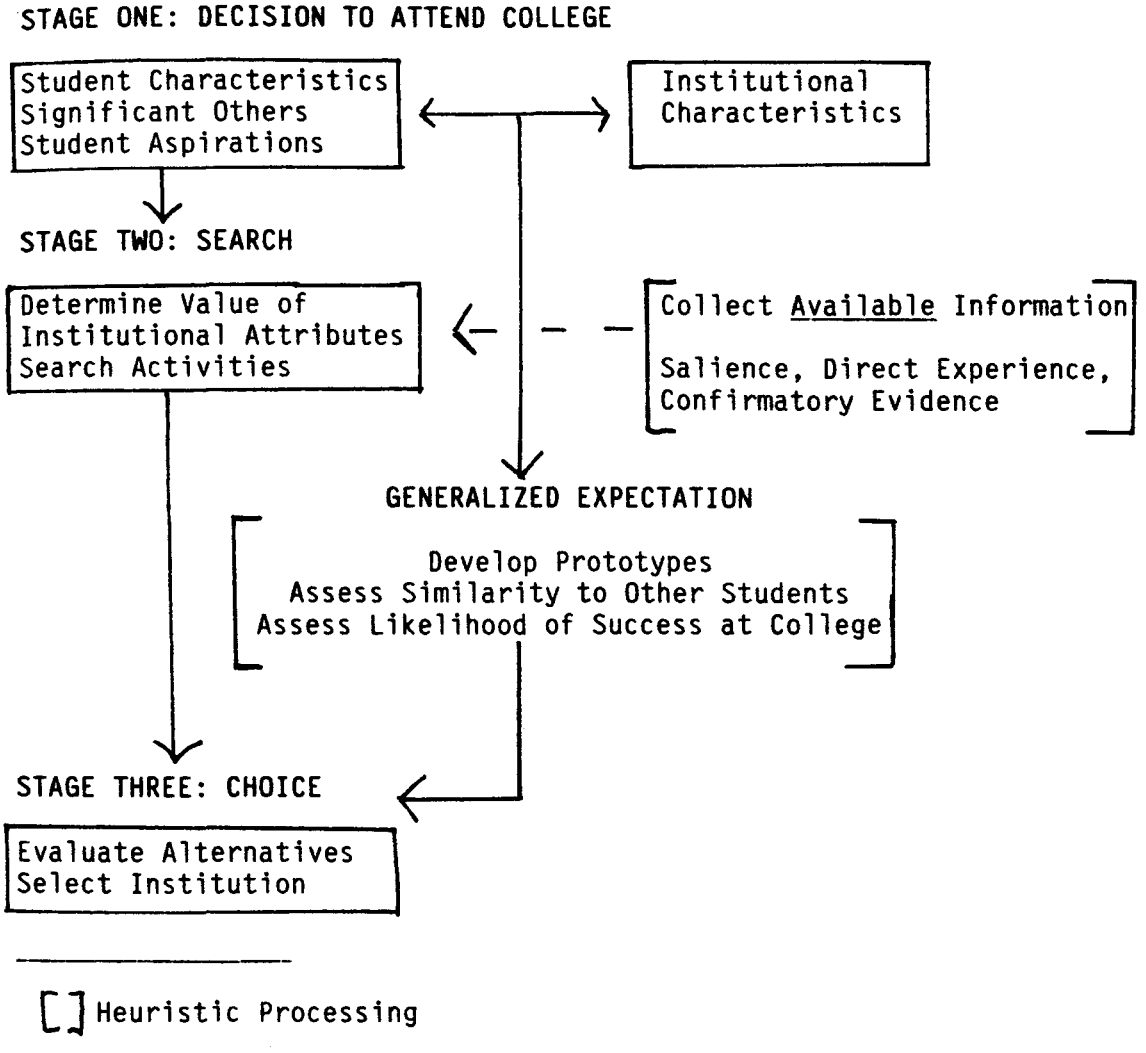
To review, the current research on college choice has found that there are many student characteristics predictive of college choice. These characteristics typically interact with institutional characteristics in determining college choice. One drawback to the existing college choice research is that it only describes the choice processes of traditionally-aged students who select four-year colleges and excludes or underrepresents two-year and non traditionally aged students. There is some evidence to indicate that differences exist between persons whose decision is "which" college to attend rather than "whether" to attend college or not, and student characteristics that describe and are relevant for the 18 to 24 year old students may not be appropriate for the student 25 and older. It is also not known whether two-year students approach college choice in the same way as four-year students. Another issue is that the college choice process is usually described as rational and orderly despite conflicting evidence which argues that students

make choices based on general expectations or stereotypes about college. The literature on cognitive heuristics offers the possibility that heuristics such as availability and representativeness may be used when making judgments. An alternative conceptualization of the college decision is one that looks at choice as consisting of elements of availability and representativeness such as: 1) an assessment of the degree to which one is similar to students at a particular school, 2) the development of prototypes of students/student life, and 3) collecting information for these judgments based on vivid and salient examples, direct experience, or confirmatory evidence. This is in addition to stable factors, such as ability and cost, which will limit the range of choices, but not necessarily the way in which the choice will be made. The major categories discussed above are portrayed in a process model that can guide research on college choice (See Figure 1).

Further research needs to be conducted which includes factors such as representativeness and availability and which addresses the full range of potential students in order to better explain and predict college choice. Specifically, several questions, arising from the preceding discussion, need to be answered: 1. Do students employ cognitive heuristics in their decisions about college? Are students influenced by personal experience and examples more than hard evidence (i.e., statistics in brochures and catalogs)? Are

Figure 1

Processes of College Choice: Multi-Stage Model, Generalized Expectations, and Heuristic Processing



judgments of similarity used to make judgments about probability of success and satisfaction? 2. What attributes do students report looking for in a college? How well do these predict choice, above and beyond the influence of stable factors such as ability and finance? 3. Do younger two-year students differ from four-year students in terms of the information they say they consider, attributes they report being important to them, and the use of heuristics in judgments? Can any of these factors be used to reliably predict choice? And, how do older two-year students compare to younger two-year students in their decision-making?

The following section describes in more detail the means by which the above questions will be investigated.

METHOD

Subjects

Subjects were one hundred and twenty five first-time college students from Loyola University of Chicago, a 4-year private institution affiliated with the Catholic church, and Oakton Community College, a 2-year public institution serving a limited geographic area that includes the North and Northwest suburbs of Chicago. The sample consisted of 85 students from Oakton and 40 students from Loyola. All students from Loyola were of traditional college age (18 - 24 years old). Forty of the Oakton students were of traditional college age, and 40 were not traditional college age (25 years and older).[1]

Materials

The packet of materials students received contained two questionnaires and a set of experimental materials. The first questionnaire consisted primarily of questions about students' characteristics and college decisions. The second questionnaire assessed students' knowledge about their college/university. Experiment materials included descriptions of the student bodies at four fictional colleges. The experiment manipulated the representativeness and availability of the information presented in

these four descriptions. A set of measures on which subjects judged their likelihood of success and satisfaction at the college described was presented following each description. The contents of the surveys and the experiment materials will be discussed in greater detail in the sections that follow.

Questionnaire A: College Choice and Personal Characteristics

The first questionnaire subjects completed contained demographic questions and questions about the college decision. Self-reported information about the college decision included both direct questions pertaining to choice (i.e., attributes considered, sources of information used), and indirect assessments of students' heuristic processing (i.e., judgments of similarity and predictions of likelihood). Data were collected using a combination of items developed specifically for the survey (and pilot-tested prior to their use), and standard demographic and self-report questions from the College Board's Entering Student Questionnaire (See Appendix A).

Information About the College Decision. Twenty-nine items relevant to the college decision, including "fixed" college attributes (e.g., type, location, size), student perceptions of college attributes (e.g., perceived college social reputation), and the opinions of significant others about the college (e.g., family, friends), were drawn from the college choice literature. For all twenty-nine items listed, students indicated whether each item had/had not influenced their decision to attend their current

institution (i.e., Loyola/Oakton). Students circled the letter corresponding to an item to indicate that it was used in their decision-making. Following this initial selection of items, subjects reported how much weight or importance they attached to each item selected, relative to the others. Importance ratings were based on a total of 100 percentage points that students divided among the selected choice items. All ratings were checked to ensure that the total number of points assigned equalled 100 ($\pm$ 1 point). If an individual's item ratings did not total 100, ratings were weighted to achieve the correct total, yet retain the relativity among items.

Summative factors characterizing the dominant themes or major components of younger students' decisions were developed from their item ratings. Factors served as a means of describing students' choices more effectively, and as the major components in a discriminant analysis. Only younger students' item ratings were included in factor development, because distinguishing younger students' choices (two-year or four-year school) was the main purpose of the discriminant analysis. Items were combined based an examination of the inter-item correlations and logical items combinations.[2] Summative scales were formed and their reliabilities assessed using Cronbach's (1966) alpha. Only scales with acceptable alpha levels (α = .60) were retained.

The four scales that met the above criterion were termed Academic Quality, Social Opportunity, No Life Disruptions, and Campus Comfort. (See also Table 1). The Academic Quality factor reflected students' attention to an institution's academic reputation, faculty, and the success of its graduates in finding employment. Social Opportunity characterized students' interest in the type of institution, type of students, and opportunity for interaction with others. No Life Disruptions referred to an interest in keeping life the same during the transition to college by maintaining friendships, employment, and the approval of parents. In contrast to the No Life Disruptions factor, Campus Comfort reflects students' desire for a change in residence, and to become established in a comfortable, new location.

In addition to identifying and rating items important in their choices, subjects also reported the sources of information they used and the kinds of activities in which they engaged when investigating colleges. Sources included those that might be considered highly available (i.e., vivid), such as former and current students, as well as somewhat less available sources, such as college catalogs or Barron's guide to colleges. Students rated the informativeness of each source on a scale from one to seven, 1 being <u>not very informative</u>, and 7 being <u>very informative</u>. Another option, <u>did not consult</u>, was included in the event that students did not seek information from one of the listed sources. Following completion of

Table 1

Relationship of Choice Items to Choice Factors

Factor	Alpha	Choice Items
Academic Quality	.61	Strong Academic Reputation
		Excellent Faculty
		Graduates Get Good Jobs
Social Opportunity	.64	Type of Institution
		Size of Institution
		Social Reputation
		Extracurricular Activities Offered
		I Can Identify With Fellow Students
		Quality of Student Body
No Disruptions	.63	Parent's Suggestion
		Helps Retain Current Employment
		Friends Going Here Also
Campus Comfort	.60	Attractive Campus
		Wanted to Be Away From Home
		Felt Comfortable Here
Items Not Entering Any Factor		Family Tradition
		Graduates Go To Good Schools
		Former Student's Advice
		High School Teacher's Advice
		Friend's Advice
		HS Counselor's Advice
		Employer's Suggestion
		Low Cost
		Financial Aid Availability
		Small Class Sizes
		Religious Affiliation
		Convenient Location

these items, students named the two sources they would have recommended to a student trying to decide whether or not to attend Oakton/Loyola.

The extensiveness of students' information search was also explored. From a list of search activities that ranged from writing for a catalog to asking for a list of area alumni and contacting them, students indicated whether or not they had performed each activity as part of their search. Students also reported how many colleges/universities they considered, not including the college/university they were presently attending.

Ratings of Similarity and Predictions About the Future. After responding to questions about the college decision and activities related to choice, subjects responded to a series of questions about their perceptions of their similarity to other students at their own and other institutions. They also made predictions about their futures at their own and another institution. Representativeness suggests that perceptions of similarity are often the foundation for judgments of likelihood. If students were using the representativeness heuristic when making decisions about college, it was expected that their perceptions of similarity to students at a college would be highly related to their judgments about the likelihood of future events and feelings at that college.

Students assessed their similarity to "the average student" at three institutions: 1) their own institution (Loyola/Oakton), 2) a

typical institution of the same type as their own, and 3) a typical institution of the other type of institution included in the study. For example, Oakton students rated their similarity to the "average Oakton student," the average student at a typical two-year college, and the average student at a typical four-year college/university. Subjects used a 9-point scale, 9 = very similar and 1 = very different. Subjects judged their similarity to other students on a variety of dimensions including interests, abilities, academic background, social background, and aspirations. Study participants estimated their likelihood of future happiness, satisfaction, success, and graduation at the "home institution" (i.e., Loyola or Oakton), and at the other type of institution (i.e., two-year or four-year). A 9-point likelihood scale was used, 9 = very likely and 1 = very unlikely.

Demographic information. Information was also collected about a variety of student characteristics. Information included students' previous academic performance (i.e., high school GPA, and high school class rank), future aspirations (e.g., highest degree sought), personal characteristics (gender, marital status, employment status), and socioeconomic status (family income, parents level of education). A single indicator of socioeconomic status was developed by summing the scores on family income (a seven point scale; 7 equals a household income before taxes of less than $10,000 a year, and 1 equals an income of over $60,000 a year), and mother

and father's level of education (a nine point scale; 9 equals grade school and 1 equals graduate or professional degree.)[3] In the case of older, married students the spouse's level of education was substituted for the opposite sexed parent's level of education.

Questionnaire B: Knowledge About Loyola/Oakton

The second questionnaire students received explored their perceptions of, and level of information about, the school in which they were enrolled. (See Appendix B). Knowledge questions were included as a means of confirming self-reported decision information and further investigating students' perceptions about their college or university. These questions served as a "check" for socially desirable responses (rather than reporting their own decision process, reporting what they thought a good or ideal decision process consists of), and were based on the assumption that students would know something about the fixed attributes, perceived attributes, and significant others they reported as relevant in their college decisions (i.e., items selected in the choice survey.) For example, if financial aid was an important item for college choice, then the student should have been able to report the type and approximate amount of financial aid awarded to him/her. Knowledge questions included both items of fact about the institution (i.e., items that could be judged true or false, such as the number of students enrolled at an institution), and items of personal fact (i.e., items with correct and incorrect answers whose

accuracy was impossible to discover, such as the number of friends a person has who also go to the same school). It should also be noted that not all factors required additional "checking." In some cases this was because factual knowledge was so evident that it would have been difficult, if not ridiculous, to question (e.g., type of institution, religious affiliation, community setting). In other cases, item verification would have required asking questions that were too subjective and from which little would have been gained (e.g., attractive campus, felt comfortable here). Table 2 shows the relationship between choice items and knowledge items.

Questions of fact asked for specific, verifiable pieces of information. Students provided information about their majors (i.e., the number of hours required, faculty in the department, location of the department, and number of courses offered), the academic quality of their fellow students (e.g., high school GPA and class rank), availability of financial aid, and size of school. Questions of fact corresponded to fixed college attributes listed in the choice survey (e.g., college size), as well as perceived college attributes (e.g., good program in my major). Cross-referencing a fixed attribute with a fact was a natural form of comparison, as "fixed" attributes, by definition, are things about the institution that are well-known and unchanging. Pairing facts with perceptions of attributes was based on the assumption that if a student had interest in or had developed a perception/opinion of a particular

Table 2

Choice Items and Knowledge Items

Choice Items	Knowledge Item
A. Strong Academic Reputation	Sum of coded knowledge scores for items about faculty, graduates, and majors (Items B, D, E, and F listed below).
B. Good Program in My Major	6. How many hours are required for a degree in your major?
	7. Approximately how many full-time faculty are there in the Department?
	8. Approximately how many courses are offered?
	9. In what building is the department housed?/In what division is the department located?
C. Family Tradition	10. Have other members of your family also attended Oakton/Loyola?
D. Excellent Faculty	32. Before you came to Loyola/Oakton, did you have any contact with faculty? (If so, please explain the nature of the contact.)
	33. What do you know or have you hear about the academic work/reputations of faculty at Loyola/Oakton?
E. Graduates Go To Good Schools	29. Do you know someone who graduated from Loyola/Oakton and has gone to graduate or professional school?
F. Graduates Get Good Jobs	30. Do you know someone who has graduated from Loyola/Oakton and has begun a successful career?
G. Former Student's Advice H. HS Teacher's Advice I. Friend's Advice J. HS Counselor's Advice K. Employer's Suggestion L. Parent's Suggestion	11. How favorable or unfavorable the following persons about your attending Loyola/Oakton?

Table 2 (continued)

Choice Items	Knowledge Item(s)
M. Will Help Me Retain My Current Employment	12. If you are employed, does going to Loyola/Oakton help you retain your current employment?
N. Low Cost	13. What is the average cost, per year of going to college?
	14. Is your cost of going to Loyola/Oakton for a year (including tuition, fees, room & board, and books) higher or lower than the average cost of going to college?
O. Availability of Financial Aid	17. What would you estimate is the percentage of students who apply for financial aid who receive it?
	18. Do you receive financial aid from Loyola/Oakton and/or other sources? If yes, from which sources and in what amount?
Q. Extracurricular Activities	31. In what extracurricular activities, if any, do you plan to become involved?
R. Small Class Sizes	32. What is the average class size at Loyola/Oakton?
S. Social Reputation	20. What kind of social reputation does Loyola/Oakton have?
U. Size (Number of Students)	26. Approximately how many student attend Loyola/Oakton?
V. Quality of Student Body	24. What would you estimate is the average high school class rank of a Loyola/Oakton student?
	25. What would you estimate is the high school GPA of the average Loyola/Oakton student?
Z. Friends Were Going Here	22. Do you have close friends who also attend Loyola/Oakton? (Friends that you knew before coming here)

attribute s/he would have some knowledge to support the perception.

Items of fact were coded in two ways. The information students provided (e.g., number of students enrolled, average class size, high school GPA of incoming students) was coded "as is" so it would be possible to examine differences in students' perceptions about those items they selected and those they had not selected. For example, disregarding the accuracy of the response, it would be interesting to determine whether students who selected small class size, estimated class size differently than those who did not select that item. In this instance, the perception would be more important than the reality. Second, the accuracy of the response was assessed using information provided by college catalogs, Barron's guide to colleges, and informed personnel at each institution. From this, an "accuracy score" was assigned to each response, with one indicating that the response is accurate and zero, inaccurate. A $\pm$ 4% margin of error was allowed for numeric responses. An accuracy score of zero was assigned to items left blank based on the assumption that students had no knowledge or information about those items.

Items of personal fact were somewhat different than items of fact. Questions eliciting personal facts were designed to gain more information about perceptions of choice, substantiate responses, or probe for more information about a response. For example, a student's report that his parents held highly favorable opinions of Loyola was used to substantiate his selection of parent's suggestion

as a reason for choosing Loyola. Along the same lines, having some information about persons who graduated from Oakton and are now successfully employed was used to verify the selection of graduates get good jobs. Questions elicited information about students' own and others perceptions of their institutions, students' perceptions of college cost, and the favorableness of significant others about the school. Information about students' personal situations was also collected. These questions probed for further information about whether students had friends who were also attending the institution, their current living, employment, and financial situations. In addition, questions of personal fact included non-verifiable accounts of students' contact and knowledge of faculty, and knowledge of graduates.

Most responses to items of "personal fact" were taken at face value. For example, if a student reported that s/he had two friends who were also attending Oakton, the response was accepted as an accurate report. There were a few exceptions. The exceptions included open-ended questions that required multiple pieces of information, or open-ended questions to which it was possible to provide better or worse responses. Open-ended questions about former students who graduated and found jobs or transferred to good schools required multiple pieces of information, and questions about contact with or knowledge of faculty elicited better or worse responses. These questions are discussed below.

Two questions examined subjects' knowledge of graduates. The first question asked if students knew anyone who graduated and then continued in school. Four pieces of information were requested: year of graduation from Loyola/Oakton, the degree in progress, name of school, and field of study. The second question asked if subjects knew anyone who graduated and had begun a successful career. Information such as year of graduation, major, and field of employment was requested. Both items were coded as yes/no (i.e., had information/did not have information) and open-ended questions. Although information obtained from the open-ended questions could not be judged for accuracy, it was judged for completeness. One point was awarded for each piece of information provided. An "amount of knowledge" score was calculated based on the number of graduates listed (up to three) and the completeness of information about each. Given this, knowledge of graduates with careers was coded on a ten-point scale (0 - 9), and knowledge of graduates who continued their education was coded from 0-12.

Two open-ended questions examined students' knowledge of faculty. One question inquired about students' general knowledge of the academic work or reputations of faculty and another about contact with faculty prior to attendance. Responses were coded for level of knowledge or degree of contact. Knowledge of faculty was indicated if a student named a specific faculty member, e.g., "I know that Luther Dowdy went to India on a Fulbright" (2 points) or,

without mentioning names or titles, made a substantive reference to a faculty member or his/her work (1 point). For example, the response "Didn't that bald psychology guy write a book about the mayor?" referred to Eugene Kennedy's Queen Bee. Responses were checked with knowledgeable parties, if necessary. No points were awarded for responses such as "They're all good" or "good reputations."

Responses to items about contact with faculty were coded similarly. Two points were awarded if respondents could recall the name of the person they contacted, e.g., "Called Julia Lane, chairperson of the department, to ask about the major," and 1 point if contact was indicated, but a specific person was not mentioned e.g., "Had my portfolio reviewed by the guy in art." Scores from both items about knowledge and contact were summed to form an indicator of knowledge about faculty (scale from 0 to 4).

Knowledge of academic reputation was perhaps the most difficult of all items to measure. Many items commonly perceived to be related to reputation (i.e., number of faculty publications, institutions at which faculty earned their degrees, number of volumes in the library, accreditation status) were not things students were likely to know. For the purposes of this research, knowledge of a college's or university's academic reputation consisted of the sum total of information a student possessed about the institution's faculty, academic programs, and graduates.

Experimental Manipulation

Experiment data were intended to complement data collected by the survey. Just as knowledge questions served as a "check" on the bias towards giving socially desirable responses, judgments made in a simulated situation served as a "check" in case persons were not aware of the impact of availability (e.g., vividness, salience) on their information selections, or the influence of representativeness (i.e., judgments of similarity) on their assessments of probability. Subjects were provided with descriptions of the student bodies at four fictional colleges. Descriptions varied both in terms of their availability and representativeness, resulting in a two-way factorial design. Subjects read all four descriptions and their presentation was counterbalanced to control for possible order effects. (See Appendix C.)

The availability of descriptions was manipulated in two ways. Descriptions were made more vivid, and hence more available, by the inclusion of a picture of students and the absence of "cold" statistical information in the text. The non-available description included a chart describing enrollment trends by year of high school graduation (younger students) and years since high school (older students), rather than a picture of students, and the body of the description of students included statistical information.

The representativeness of a description related specifically to students' age. The representative description for the older student

was unrepresentative of the younger student and vice versa. In the description representative of younger students, the student body was described as "recent high school graduates" who will complete their educations "between the ages of 20 and 24." The description representative of older students characterized the student body as "not recent high school graduates" and "not in the typical age range (18-24) for college students." The descriptions differed somewhat in style, but contained the same points of information.

After reading each description, students made judgments about their likelihood of writing for more information, writing for an application, and attending the college described, as well as their likelihood of success, liking, and satisfaction (representativeness) once at the college. Because information that is available should be more interesting, students also rated each description in terms of their level of interest in it. Available information should also be more easily recalled, so after an interval, (i.e., filling out the self-report sections) students were asked to recall the most memorable description. Students were only asked to remember the facts of one description, of their own choice, because it was felt that asking students to recall all four descriptions would be difficult, confusing and excessively taxing. If students were using the availability heuristic, then an available decription (i.e., a description with a picture) should have come to mind more easily than a non-available description (i.e., a description with a chart

or table of statistics.)

Two open-ended questions, following each description, assessed the extent to which subjects perceived themselves as similar to or different from the students at the college described. These questions were originally included in the pilot-study of materials to determine if subjects were differentiating the descriptions based on the age of the college populations described. Because of the size of the sample, the number of persons who chose not to respond to the open-ended questions, and the idiosyncratic nature of the responses provided, these items were not retained for analyses.

Procedure

Loyola students' participation was solicited, with the support of appropriate college personnel, at Freshmen orientation sessions conducted prior to the Fall 1987 term. All students attending these sessions were randomly assigned to orientation groups. Three groups participated in this research. Because Oakton did not have a formal orientation program, the participation of two-year students was obtained in a variety of other ways, with different methods used for younger and older students.

Younger Oakton students' participation was obtained, with the instructors' consent, in entry level Humanities classes (HUM 101 - Modern Culture and the Arts). Subjects participated on the first day of classes, during the first class periods of the day (i.e., between the nine and eleven o'clock hours). Humanities 101 was

chosen because it typically draws the type of student desired, i.e., a first time, traditionally-aged college student. Surveys and experiment materials were administered to all students in the class. Classes were oversampled to find the desired number of students who met the age and "first time in college" criteria. Data from students not meeting this requirement were set aside and not included in analyses.

Obtaining the participation of the elusive, older Oakton student proved difficult and necessitated a number of different procedures. It was relatively easy to locate young, 2-year college students because of their adherence to traditional enrollment patterns. Older students, however, followed no such patterns and were scattered throughout a wide range of courses, making them more difficult to access in a group. A letter from the President was sent to all students who were 25 and older, had no previous college experience, and were enrolled in at least six hours at the college. The letter informed students of the project, invited them to participate, and provided instructions about locations, days and times for participation. When the letter yielded fewer study participants than anticipated, a second invitation was extended by postcard, and the times and days available for students to come to the college were expanded. In addition to a personalized letter and postcard, posters recruiting older students were displayed on campus, and all faculty with older students in their classes were

encouraged to read an announcement about the project. Students who participated came to either the Office of Research on the main campus in Des Plaines, or the Dean's Office at the Oakton East campus in Skokie. All students were instructed as to how to complete the materials, and were provided ample time and work space.

Although the procedures for recruiting student participation differed according to group, the procedure for administering the survey and experiment materials was essentially the same for all groups. The only difference between groups was that younger students at both institutions completed the materials in large, organized groups, and older students were often alone, or in small groups. All participants completed materials while in classrooms or conference rooms at their schools. Verbal instructions emphasized that participants should work forward through the materials without looking back to previous sections. Packets were arranged with the experiment materials first, followed by the questionnaire on college choice, then the questionnaire on knowledge about the college. Materials were self-administered. Participation was voluntary and students signed consent forms that assured them of anonymity and informed them that they could withdraw from the project without penalty.

Together, the survey and experiment collected information pertinent to the investigation of students' college choices. The choice questionnaire looked at the more traditional college choice

variables: demographics, fixed and perceived college attributes, and the opinions of significant others. The knowledge questionnaire examined the validity of students' descriptions of choice by looking at both the factual knowledge and perceptions they held about their schools. Last, the experiment (primarily), and the choice survey (secondarily), provided data relevant to the question of whether heuristics might be used in the college choice process. Data were collected not only from the typical college going population of young, four-year college students, but from both older and younger two-year students as well. In addition, to prevent contamination of students' reports of choice and their knowledge about their institutions, data were collected early in the students' association with the school (e.g., prior to school for four-year students; on the first day for younger, two-year students, and during the first weeks for older students).

In the following section, the results of this study will be examined.

RESULTS

The study was divided into two major parts, a survey and an experiment. Although data from each section were analyzed separately, the results from one were intended to enrich and complement the other. The analysis was structured to answer the major questions posed by this research. Stated generally, these questions were a) "What differences existed between the college choice processes of different types of college students (i.e., older and younger two-year students, younger two-year and four-year students)?", b) "What combination of factors best predicted the type of college selected?", and c) "What role did cognitive heuristics play in college decision-making?". Before beginning a description of the answers to these questions, it might first be useful to present an overview of the analysis of the survey and the experiment.

First, students' personal and academic characteristics were examined using means and frequencies. Differences between types of students were explored. Students were categorized into "types" based on age and school, which resulted in three groups: 1) older, two-year students, 2) younger, two-year students, and 3) younger,

four-year students. The significance of differences between groups on categorical variables (e.g., race, gender) was determined by chi-square analysis. T-tests were used to determine the significance of differences between younger and older two-year students, and younger two-year and four-year students on interval level variables such as high school grade point and socioeconomic status.

Analysis of self-reported college choice information involved the calculation of chi-square statistics to examine differences in students' selection of items (i.e., item was/was not used in decision-making), consultation with and informativeness of sources, and performance of search activities. T-tests examined differences between groups' ratings of item importance, informativeness of sources, and number of colleges considered. Discriminant analysis was employed to examine the ability of choice factors to distinguish the choices (two-year school versus four-year school) of younger students.

Frequencies and means of responses to knowledge questions, particularly questions of personal fact, were used to examine students' perceptions of their institutions, and to determine the amount of information students had about their schools. Crosstabulations between knowledge items and choice items showed which choice items students selected even though they possessed no information to support their choices, and conversely, those choice

items purportedly not used in decision-making, but about which students were knowledgeable. Assessments of students' knowledge about their institutions, in addition to providing a fuller picture of their choices and their perceptions of their choices, added to the argument that students may not have just considered facts when selecting a college, but may have, in fact, used cognitive heuristics.

Determining whether or not students used heuristics in college decision-making rested on the analysis of both survey and experiment data. Examination of subjects' ratings of similarity to students at their own and other institutions, and predictions about their futures at their own and other types of colleges were analyzed in two ways. First, correlations were calculated between ratings of perceived similarity to students and predictions about future college life (i.e., success, satisfaction, liking, graduation) for each group of students (i.e., older two-year, younger two-year, younger four-year). It was predicted that if students were using representativeness, similarity would be highly related to predictions about the future. Second, t-tests were used to examine the differences between older and younger two-year students' ratings of their predicted success, happiness, satisfaction, and graduation at typical two-year and four-year institutions. T-tests were also used to look at the differences between the ratings of younger two-year and four-year students. If using representativeness,

students should have rated themselves as more similar to the average student at their own institution, or an institution like it (i.e., of the same type), than other groups. Within the two-year group, differences between older and younger students' predictions about their future at Oakton, and similarity to Oakton students were also assessed.

A two-way factorial analysis of variance was used to analyze data from the experiment. The main goal of this analysis was to determine the effect of representativeness and availability on students' judgments about college. It was hypothesized that students' likelihood of inquiry, application, and attendance at a college, as well as their eventual liking, success, and satisfaction at that institution would vary based on the representativeness and availability of the college's description.

Results of the survey and experimental investigation are presented in the sections that follow, beginning with a description of the research participants.

Student Characteristics

Differences between students occurred for personal characteristics (i.e., race, marital status and SES), enrollment and employment status, future educational aspirations, and past academic performance. Although most students were white, the group of four-year students contained significantly more non-white students than either group of two-year students (see Table 3). For the

purposes of analysis, original categories used to classify students were collapsed into white and non-white because of the number of empty cells. Although most were white, it appeared that many students came from ethnic households where English was not the first language. No statistically significant difference existed between groups with respect to language.

Significant differences appeared between groups' marital, employment, and college enrollment statuses. All or nearly all younger students (both two-year and four-year) were single. In contrast, the older group contained an almost even mix of married and single students. Most younger two-year and four-year students were enrolled as full-time students, while slightly less than one-third of older students were enrolled full time. Although similar in enrollment status, two-year and four-year students differed in employment status. The majority of younger two-year students (86%) were employed, more than double the percentages of four-year students and older two-year students. Groups were composed of approximately the same percentages of female and male students. (See Table 3.)

Past academic performance and future plans were also sources of significant differences between students. Four-year students performed better in high school than older students. Both four-year and older two-year students performed better than younger two-year students. Four-year students reported higher levels of past

Table 3

Student Characteristics: Percentages and Chi-Squares

	Older 2-year	Younger 2-Year	Younger 4-year	χ^2(N=120)	df
Personal Characteristics					
Race				10.45**	2
White	91%	93%	70%		
Non-White	9%	7%	30%		
Language Spoken At Home				8.14	4
English	62%	73%	63%		
English and Another Language	32%	27%	23%		
Another Language	6%	0%	15%		
Marital Status				47.7***	2
Married	59%	7%	0%		
Single	41%	93%	100%		
Gender				.20	2
Male	38%	43%	40%		
Female	62%	57%	60%		
Enrollment Status					
Full Time	32%	86%	92%	70.8***	4
Part Time	68%	14%	8%		
Employment Status				42.3***	8
More than 20 Hrs/Week	33%	50%	10%		
Less than 20 Hrs/Week	3%	36%	32%		
Homemaker	12%	0%	0%		
Not Employed-Seeking	24%	7%	28%		
Not Employed-Not Seeking	27%	7%	30%		
Highest Degree Sought				50.58***	8
Certificate/Associates	28%	13%	0%		
Bachelors	19%	27%	17%		
Masters	9%	30%	20%		
Doctorate or Other Professional Degree	0%	2%	45%		
Undecided	44%	27%	18%		

*p<.05 **p<.01 ***p<.001

Table 3

Student Characteristics: Percentages (Cont)

	Older 2-year	Younger 2-year	Younger 4-year
Socioeconomic Characteristics			
Parents' Education: Mother			
Grade School	31%	2%	13%
Some High School	14%	12%	5%
High School Diploma	52%	26%	10%
Business/Trade School	0%	7%	13%
Some College	0%	23%	10%
Associate's Degree	0%	6%	13%
Bachelor's Degree	3%	2%	13%
Some Graduate School	0%	2%	0%
Graduate Degree	0%	2%	25%
Parents' Education: Father			
Grade School	28%	7%	17%
Some High School	17%	9%	2%
High School Diploma	38%	9%	15%
Business/Trade School	3%	14%	8%
Some College	3%	21%	10%
Associate's Degree	3%	2%	0%
Bachelor's Degree	7%	19%	15%
Some Graduate School	0%	2%	5%
Graduate Degree	0%	16%	28%
Income			
Less than $10,000	4%	0%	0%
About $10,000-20,000	18%	5%	8%
About $20,000-30,000	22%	12%	20%
About $30,000-40,000	18%	38%	18%
About $40,000-50,000	15%	20%	23%
About $50,000-60,000	7%	8%	5%
Over $60,000	15%	18%	26%

academic performance (i.e., high school grade point averages) than younger two-year students (M=3.3 and M=2.6, respectively), $t(80) = -4.8$, $p<.001$. Similarly, older two-year students had significantly higher grade point averages (M=2.9) than younger two-year students (M=2.6), $t(68) = 1.9$, $p<.05$. Students belonging to different groups also planned on significantly different academic futures. Younger four-year students had the most ambitious academic plans. The majority planned to pursue advanced degrees and, at a minimum, expected to earn a Bachelor's degree. A relatively small percentage were undecided about their plans (18%). Two-year students, of both ages, showed less ambition and more indecision. A quarter of younger two-year students were undecided about their education plans, 13% planned to stop at the certificate or associate's level, and none planned to obtain a degree higher than master's level. Many older two-year students were undecided about their degree aspirations, and few were inclined to pursue a Bachelor's or Master's degree.

When making educational plans, four-year students appeared to be following in their parents' footsteps. Larger percentages of parents of four-year students had obtained a college education than parents of either younger or older two-year students. The difference between mothers' levels of education was particularly striking. Also, older two-year students had the highest percentage of parents without high school diplomas and the lowest percentages

of parents who completed college.

Younger two-year students were of significantly higher socioeconomic status ($\underline{M}$=13.54) than older students ($\underline{M}$=16.65), $\underline{t}(68) = 2.69$, $\underline{p}<.01$, but no such differences existed between young two-year and four-year students ($\underline{M}$=12.52). Socioeconomic status was coded on a scale from 3-25, and was based on family income and parents' education. Lower scores indicated higher socioeconomic status and higher scores indicate lower SES.

Overall, some of the above cited differences and similarities seemed to be a function of students' age, college type, or both. Four-year students offered few surprises; they held higher educational expectations and had better high school track records than two-year students. In addition, most four-year students were single, enrolled full-time, and not employed on a full-time basis. The only notable difference that might not have been predicted was the number of non-white students enrolled at a four-year school. Younger two-year students were also single, but had poorer academic records and were less academically ambitious. Most had taken on a heavy work load, choosing to combine full-time enrollment with full or part-time employment. They did not differ from four-year students in terms of socioeconomic status. Older students, while demonstrating better academic records than their younger counterparts, did not generally have plans to pursue more education. Most were enrolled part-time, although not as many

worked full or part-time as in the younger two-year group. Most were married. Older two-year students had the lowest socioeconomic standing of all three groups.

College Decision

Several aspects of students' decisions and decision processes were examined and comparisons between types of students were made. First, the search itself (i.e., the kinds of activities in which students' engaged, and the sources of information they considered) were investigated. Second, items selected for use in the college decision, and their relative importance to that decision were analyzed. Related to this, similarities and differences between the choice processes of different types of students were examined. Last, the ability of factors to distinguish and predict the choices of younger students (2-year college vs. 4-year college) was assessed.

Search Activities. In general, four-year students engaged in more search activities than either older or younger two-year students. (See Table 4.) Half or over half of four-year students engaged in four out of the eight search activities listed. Although it could be argued that one letter would have accomplished the first three activities (e.g., wrote for a catalog, wrote for information, wrote for an application), four-year students still were more active than either group of two-year students. A majority of younger,

Table 4

Search Activities: Percentages and Chi-Squares

	Older	Younger		
	2 Year	2 Year	4 Year	χ^2 (N=120; df=2)
Wrote for Catalog	33%	44%	70%	10.62**
Wrote for Information	15%	36%	68%	21.32***
Wrote for Application	36%	71%	75%	15.94***
Talked with Friends	31%	38%	50%	1.80
Talked w/Acquaintances	21%	33%	48%	5.57
Went to College Night	18%	29%	45%	6.25*
Admission Rep	42%	36%	40%	.87
Area Alumni	3%	4%	5%	.18

*p<.05 **p<.01 ***p<.001

two-year students engaged in only one activity, writing for an application. The majority of older students did not not engage in any of the activities listed.

Although many students from all groups wrote to their schools, the proportions in which they did so differed. The majority of four-year students wrote for a catalog, in comparison to less than half of younger and older two-year students. Very few older students wrote for more information, but a slightly higher percentage of their younger counterparts did, as did over half of four-year students. Many younger two-year and four-year students wrote for applications, almost double the percentage of older students who did. For two-year students, writing for information may have been unnecessary because of the availability of information mailed to their homes on a regular basis. The only other activity about which groups differed was attendance at a college night. This difference does not appear to be entirely influenced by students' age because more four-year students attended than either younger or older two-year students.

There were no significant differences in the proportions of students in each group who approached friends, acquaintances, admissions representatives, or area alumni. Slightly more four-year students spoke with friends or aquaintances who had attended their school, than either younger or older two-year students, although these differences were not significant. Groups were nearly

identical with respect to contacting admissions representatives. Over one-third of students in all groups spoke to admissions representatives, this being a popular source of information for most older students (42%). Very few in any group, however, reported asking for the names of area alumni in order to talk to them.

Sources Consulted. In addition to indicating whether or not they had performed a number of different search activities, students rated the informativeness of the sources of information they consulted during their college search. These data were analyzed in two ways. First, students' selection of sources consulted was compared. Students responses were reduced to two categories, one for students who consulted a source (i.e., rated a source), and one for students who chose the did not consult response option. Second, students' ratings of sources' informativeness were compared using t-tests.

When describing their information searches, most students reported writing for information, rather than seeking out informed persons to talk to. Despite this, when asked to rate the informativeness of various sources, students provided ratings for sources they did not report seeking out (see Table 5). Even though the majority of two-year students did not report writing for further

Table 5

Sources Consulted: Percentages and Chi-Squares

	Older 2 year	Younger 2 year	Younger 4 year	χ^2 (N=120; df=2)
Current Students	56%	60%	60%	.17
Former Students	47%	56%	60%	1.27
College Catalog	79%	76%	85%	1.18
Admissions Rep	59%	58%	23%	.97
Brochures	82%	80%	87%	.87
College Guide	35%	47%	52%	2.24
HS Counselor	3%	71%	77%	16.08***

* p<.05 **p<.01 ***p<.001

information or a catalog, a majority had consulted the catalog or a brochure. Four-year students were similar, the majority having consulted brochures and having read the catalog. Again, most students relied on printed material, either the college catalog (over 76%) or brochure (80% or more), but many students also had contacted current or former students. Given the similarities between groups, it was not surprising that chi-square analyses of these data yielded non-significant results. Groups differed in only one instance, larger percentages of younger students had consulted with their high school counselors than had older students.

Students' reports of the sources they consulted differed from reports of the activities in which they engaged. This suggests that students were not necessarily active in their searches for information. Questions pertaining to search activities presumed that students had "sought out" various persons, or had written for information. These questions did not consider that students may not have been <u>active</u> when looking for information. Instead, they may have used information mailed to their homes, or may have spoken to persons with whom they were regularly in contact. In other words, students may not have made special efforts to gather information about the college. This seems to have varied somewhat based on both the type of student (i.e., four-year students were more active than two-year students), and the information desired (i.e., written materials or the opinions of others). This provides suggestive evidence for the use of the

availability heuristic in college choice. Students used available sources and materials rather than engaging in active searches for new information or materials.

Despite the fact that nearly equal proportions of students from each group consulted the same sources, they did not agree on the informativeness of those sources. Older two-year students rated all sources (i.e., current and former students, admissions representatives, college catalogs, and brochures) except for college guides and high school counselors (which they did not rate or did not use) as significantly more informative than younger two-year students (see Table 6). Younger four-year and two-year students agreed more often about the informativeness of sources than did two-year younger and older students. Four-year students tended to rate sources as slightly more informative than two-year students, but only their ratings for former students and college brochures were significantly different. Four-year students found both sources more informative than did younger two-year students.

An open-ended question asked for the top two sources students would recommend a friend consult if seeking information about Loyola/Oakton. Only first responses were coded because of the number of missing second responses. Admissions representatives were the number one choice of both groups of younger students even though they did not receive either groups' highest rating. Younger two-year

Table 6

Students' Ratings of Sources' Informativeness: Means and T-Tests

	Older		Younger				
	2 year[a]	2 year[b]	4 year[c]	t_1†	df	t_2‡	df
Current Students	5.4	4.6	5.3	2.0*	34	-1.76	46
Former Students	6.0	4.6	5.7	2.6**	27	-2.3*	42
College Catalog	6.2	5.4	5.5	2.1*	51	- .17	64
Admissions Rep	6.2	4.6	5.3	2.9**	32	-1.49	47
Brochures	5.7	4.6	5.5	2.7**	51	-2.58**	63
College Guide	N/A	4.1	5.1	N/A		-1.88	34
HS Counselor	N/A	4.8	4.3	N/A		1.03	59
# of Colleges Considered	1.8	3.0	3.2	-1.59	46	- .35	72

*p<.05 **p<.01 ***p<.001

†t_1 comparison of a and b

‡t_2 comparison of b and c

students rated both the college catalog and high school counselors as more informative than admissions representatives, and four-year students rated former students, the catalog and brochures as more informative than admissions representatives. Older two-year students, on the other hand, recommended a wide variety of sources, none of which received a unanimous endorsement by the majority of students. Younger two-year and four-year students also considered a larger number of colleges than did two-year older students, although differences between groups were not significant.

Items Selected in College Choice. Analysis of students' choices included an examination of items selected/not selected for use in the college decision and, of those items selected, the importance attached to each. Items refer to perceived college attributes, actual college attributes, and opinions of significant others (see Table 1, p. 33). Factors refer to the summative scales Campus Comfort, Academic Quality, No Life Disruptions, and Social Opportunity developed from those items. First, the items selected for use in students' decision will be reviewed.

Students' item selections were compared and contrasted to develop a clearer picture of how different types of students approached choice. Item selections reflected those differences. Those items selected by the majority of students in each groups will be discussed first, followed by a review of the significant differences between groups.

Two-year students, both young and old, considered the same relatively small set of items when deciding to go to a community college. Out of a possible twenty-nine items, three were included in the decisions of the majority of two-year students. Students' selected mostly fixed college attributes such as low cost, convenient location, and proximity to home, i.e., close to home. A fourth factor, selected by the majority of younger two-year students, was parent's suggestion. (See Table 7).

The majority of four-year students, on the other hand, considered more and different items than two-year students. Although not important to the majority of two-year students, four-year students looked at the institution's reputation and the programs it offered, as evidenced by their selection of the perceived attributes strong academic reputation and good program in my major. Although four-year students also included fixed college attributes in their decisions, they differed from two-year college students in the particular attributes they selected. Half of four-year students were looking for an institution of a particular type and size (i.e., type of institution and institution size.) In their one similarity to two-year students, over half also considered proximity, i.e., close to home.

A simple characterization of the items selected by the majority of students in each group is only one very basic way to describe and differentiate their choices. Chi-square analyses of choice items

revealed which items were important or unimportant to nearly equal proportions of students in each group (i.e., non-significant). That information, combined with significant chi-squares statistics, produced a clearer picture of the differences in students' choices.

Location and comfort were important to sizable proportions of all students. ("Sizable" meaning approximately one-third or more students in each group selected the item). Students in each group selected "comfort and proximity" items such as an attractive campus, convenient location, and felt comfortable there when making their decisions. No significant difference existed between groups with regard to these items. (See Table 7).

Some items, however, were not considered in the decisions of the majority of students. (To be considered relatively unimportant, approximately two-thirds or more students in each group must not have selected the item.) These items included the quality of the faculty, extracurricular activities offered, institution's social repuation, the availability of financial aid, and the opinions of certain significant others (i.e, high school counselors and teachers, employers).

It was surprising that excellent faculty was cited by such a small proportion of students, particularly as other quality-related items (i.e., academic reputation) had been important to at least one group of students (i.e., four-year). Similarly, the quality of life on campus, as exemplified by availability of extracurricular

Table 7

Items Selected in the College Decision:

Percentages and Chi-Squares

Items	Older 2 Year	Younger 2 Year	Younger 4 Year	χ^2(N=120;df=2)
Academic Reputation	32%	36%	85%	27.0***
Good Program in Major	35%	36%	68%	10.6**
Family Tradition	9%	11%	20%	2.2
Excellent Faculty	18%	18%	22%	.35
Graduates Get Good Jobs	9%	25%	30%	7.01*
Graduates Go to Good Schools	9%	41%	50%	14.9***
Former Students' Advice	12%	18%	20%	.96
High School Teacher's Advice	0%	18%	15%	6.6*
Friends' Advice	38%	25%	5%	12.17**
High School Counselor's Advice	3%	18%	18%	4.6
Employer's Suggestion	0%	4%	0%	N/A
Parent's Suggestion	3%	52%	32%	21.72***
Will Help Retain Employment	15%	30%	5%	9.14**
Low Cost	65%	61%	10%	29.9***
Availability of Financial Aid	12%	7%	18%	2.3
Type of Institution	21%	20%	50%	10.84**
Extracurricular Activities	6%	18%	20%	3.3
Small Class Sizes	24%	36%	45%	3.7
Social Reputation	6%	14%	22%	4.15
Religious Affiliation	0%	0%	22%	N/A
Size of Institution	12%	23%	50%	18.2***
Quality of Students	15%	14%	35%	6.9*
Attractive Campus	38%	30%	42%	1.6
Close to Home	85%	80%	52%	11.77**
Identify with Fellow Students	21%	30%	30%	1.0
Friends Were Going Here Also	15%	36%	5%	18.8***
Wanted to Be Away From Home	0%	4%	22%	10.1**
Convenient Location	65%	70%	48%	4.9
Felt Comfortable Here	44%	32%	48%	2.4

*$p < .05$ **$p < .01$ ***$p < .001$

activities, social reputation were also relatively unimportant. Perhaps feeling comfortable at an institution comprised certain social factors like social reputation or the kinds of activities offered. In addition, availability of financial aid was not included in the decisions of many students. This is understandable in the case of two-year students whose college costs were relatively low, but somewhat surprising for four-year students.

Taken together, these data indicated that two-year and four-year students had a common interest in the kind of place they attended, both in terms of its location and their feelings of comfort while there. Certain social factors, however, such as social reputation and extracurriculars offered, were not selected by many students. In addition, although many four-year students professed interest in their school's academic reputation and programs, fewer were concerned about the quality of the faculty. Perhaps this is an indication that quality faculty was a part of student's concept of academic reputation. Despite certain similarities in their choices, however, there were fundamental differences in the items included in students' decisions.

Most significant differences between students occurred in the areas of cost, academic reputation, opportunities for a career after graduation, as well as parent's and friend's advice, and friends also attending. More community college students, both older and younger, considered the low cost of their school than four-year students.

Given the relative costs of the two schools included in the sample, this is not a surprising result. In contrast, an institution's strong academic reputation was a concern of far more four-year students than two-year students. Not surprisingly, both groups of younger students took into account their opportunities for careers or further education after graduation (based on the histories of past graduates), while older students did not. Only nine percent of older students gave thought to the academic and career records of graduates, but graduates get good jobs was cited by one-quarter or more younger students, and graduates go to good graduate schools was selected by over 40% of younger two-year and four-year students. Also, very few older students incorporated the opinions of their parents into their decisions about college, but parent's suggestions figured into the decisions over one-third of four-year students and over half of two-year students.

The opinions and plans of friends were also considered by many students. Many younger two-year students considered the fact that their friends were also attending Oakton. This was not something that was of concern to many four-year or older two-year students. Over one-third of older students, however, listened to friends' advice. Although friends attendance was important to significantly larger proportions of younger two-year students than any other group, friend's advice was not as selected by many of them or many four-year students as an item to be considered.

In summary, based on the evident similarities and differences in students' item selections, it appeared that items considered relevant in decisions were affected both by the students' age and the type of college they selected. Younger students were, understandably, concerned about their futures, either at other schools or in the job market, and wanted to know about the performance of graduates. Four-year students considered more traditional choice factors such as an institution's type, size, reputation and academic programs. Younger two-year students, on the other hand, were concerned about their parent's opinions and friends attendance, while older two-year students were concerned about their friend's opinions, but not necessarily their attendance. Both groups of two-year students considered cost, and all students looked at location and comfort.

Looking at the items <u>selected</u> by students is one way to describe and understand their choices. Examining the weight an item carried in a student's decision, however, provides a deeper understanding of the meaning and importance of that item in the choice decision. An item's weight was free to vary from 0 (meaning the item was not considered important at all), to 100 (meaning that it was very important and the only item considered). Analysis of weighted items revealed that two-year students (younger and older) weighted many items similarly. That is, younger and older students constructed very similar decision "equations." Younger and older

two-year students gave significantly different weights to only four of twenty-nine items. The decisions of younger two-year and four-year students, in comparison, were very different. Analyses of the item weights awarded by two-year and four-year students revealed ten significant differences. Students' choices will be explored both in terms of their similarities and differences.

Older and younger two-year students approached the choice of a community college in very similar ways, both in terms of the items they selected and the weights they gave to those items. Low cost was important to both older and younger students, but it received younger students' highest mean rating. Also important to two-year students was the college's convenient location. Convenient location may be somewhat related to another practical factor rated highly by students, will help me retain my current employment. Practical items were not the only items that were important to two-year college students. A good academic program was important to both older and younger students, and to a lesser extent, a strong academic reputation. (See Table 8).

Despite their similarities, younger and older two-year students differed on a few item ratings, namely, proximity to home, attractive campus, availability of financial aid, and graduates get good jobs. The item close to home was important to both groups, although it was significantly more important to older than younger students. In fact, it was older students' highest rated item.

Table 8

Choice Weightings: Means and T-Tests

Comparison of Older and Younger Two-Year Students

Item	2 year Older	2 year Younger	t (df=77)
Strong Academic Reputation	3.29	4.75	- .55
Good Program in My Major	9.14	5.62	1.03
Family Tradition	.73	.75	- .03
Excellent Faculty	1.17	1.11	- .06
Graduates Get Good Jobs	.73	3.66	-1.23
Graduates Go To Good Schools	.29	4.35	-2.28**
Former Student's Advice	1.23	.62	.70
High School Teacher's Advice	0	.73	N/A
Friend's Advice	5.05	2.15	1.60
HS Counselor's Advice	.05	.88	-1.19
Employer's Suggestion	0	.22	N/A
Parent's Suggestion	0	9.86	N/A
Will Help Retain Employment	5.29	4.44	.31
Low Cost	8.23	12.26	- .99
Financial Aid Availability	1.61	.06	1.94*
Type of Institution	1.47	1.17	.34
Extracurricular Activities	.20	.80	-1.06
Small Class Sizes	.88	2.46	-1.51
Social Reputation	.44	.53	- .18
Religious Affiliation	0	0	N/A
Size (Number of Students)	.15	1.26	-1.71
Quality of Student Body	.82	.82	.02
Attractive Campus	2.76	.66	2.38**
Close To Home	16.91	7.02	2.59**
Identify With Students	1.67	2.42	- .59
Friends Were Going Here	.73	2.06	-1.13
Wanted to be Away From Home	1.17	0	N/A
Convenient Location	5.91	6.71	- .37
Felt Comfortable Here	5.44	1.60	1.90

*p<.05 **p<.01 ***p<.001

Attractive campus, and availability of financial aid, in contrast, were not among the highest rated by either group, but were rated significantly higher by older students. Younger two-year students gave greater weight to graduates go to good schools than did older two-year students. Parent's suggestion was two-year students' second highest rated item, but it was impossible to make a statistical comparison between the ratings of older and younger two-year students on this item, because no older students considered it. The fact that it was not at all important to older students is, however, of practical significance.

Younger two-year and four-year students exhibited little similarity in the way they constructed their decisions. They gave significantly different weights to approximately one-third of the twenty-nine items (10 out of 29 items), but were evenly split in their disagreements. That is, half of the items were more important to four-year students than younger two-year students, and half were more important to younger two-year students than four-year students. They also had points of agreement, but mostly about items that were of little importance to either group. Descriptions of their differences will begin with a discussion of the items most important to four-year students.

The items academic reputation and good program in my major received four-year students' highest ratings; they rated these items more highly than any others (see Table 9). Academic reputation was

Table 9

Choice Weightings: Means and T-Tests

Comparison of Younger Two-Year and Four-Year Students

Item	Younger 2 Year	Younger 4 Year	t (df=83)
Strong Academic Reputation	4.75	17.17	-3.94***
Good Program in My Major	5.62	16.47	-3.07**
Family Tradition	.75	1.55	-1.04
Excellent Faculty	1.11	1.25	- .18
Graduates Get Good Jobs	3.66	2.22	.65
Graduates Go To Good Schools	4.35	7.25	-1.10
Former Student's Advice	.62	1.32	-1.16
High School Teacher's Advice	.73	.75	- .02
Friend's Advice	2.15	.50	-1.73
HS Counselor's Advice	.88	1.75	- .99
Employer's Suggestion	.22	0	N/A
Parent's Suggestion	9.86	3.42	2.17*
Will Help Retain Employment	4.44	.32	2.70**
Low Cost	12.26	.92	3.55***
Financial Aid Availability	.06	1.25	-1.75
Type of Institution	1.17	3.10	-2.27*
Extracurricular Activities	.80	1.82	-1.16
Small Class Sizes	2.46	2.65	- .15
Social Reputation	.53	1.27	-1.48
Religious Affiliation	0	1.65	N/A
Size (Number of Students)	1.26	4.37	-1.66
Quality of Student Body	.82	1.92	-1.31
Attractive Campus	.66	2.82	-2.25*
Close To Home	7.02	3.80	2.07*
Identify With Students	2.42	2.02	.36
Friends Were Going Here	2.06	.35	2.17*
Wanted to be Away From Home	0	.92	N/A
Convenient Location	6.71	3.20	1.90
Felt Comfortable Here	1.60	6.17	-2.45*

*p<.05 **p<.01 ***p<.001

important to two-year students as well, but significantly less so than four-year students. Similarly, two-year students awarded some degree of weight to a good academic program, although not as much as four-year students. Four-year students also expressed more interest than two-year students in the type of institution, as well as its general ambience. The importance of a school's general atmosphere was reflected in four-year students' higher ratings of both attractive campus and felt comfortable here. Both items were selected by almost equal proportions of students, but the higher ratings awarded by four-year students perhaps reflected the perspectives of persons who planned to live on campus.

Practical items, such as low cost, helps me retain my current employment, and close to home received more weight in the decisions of younger two-year students than four-year students. Low cost was the highest rated factor for younger two-year students, but was about the lowest rated for four-year students. As more younger two-year students were employed than four-year students, it was not surprising that younger two-year students thought retaining their current employment was more important than did four-year students. Proximity to home, though more important to four-year students than all other factors about which younger two-year and four-year students have differed, was twice as important to younger two-year students. Younger two-year students also attached greater importance to the actions and opinions of significant others, namely

friends were going here also and parents' suggestion, than four-year students.

Four scales were created in an effort to reduce the twenty-nine items into a smaller set of salient factors that would more effeciently characterize choice. The four scales were Academic Quality, Social Opportunity, Campus Comfort, and No Life Disruptions. Factors were developed and reliabilites assessed based on younger two-year and four-year students' item weightings only (see Table 1, p.33). Younger two-year and four-year students' scores on all factors differed significantly and captured the essential differences in the decisions of these two groups of students.

Academic Quality was by far the most important factor for four-year students. Although it was the second most important factor for younger two-year students, the ratings for each group were still significantly different (see Table 10). This indicates that the primary focus of four-year students was the perceived quality of their schools and the programs they offered. The second most important factor for four-year students was Social Opportunity. They rated this factor twice as highly as younger two-year students. As most of the four-year students in this sample were residents at their university it should come as no surprise that they would be interested in activities and opportunities for interactions with others outside of the classroom. Along these same

Table 10

Comparison of Younger Two-Year and Four-Year Students Weightings of Choice Factors: Means and T-Tests

	Young 2 Year	Young 4 Year	t (df=83)
Academic Quality	9.50	20.65	-2.36*
Social Opportunity	7.00	14.25	-2.00*
No Disruptions	16.37	4.00	3.12**
Campus Comfort	2.20	9.92	-3.04**

*p<.05 **p<.01 ***p<.001

lines, four-year students also rated Campus Comfort significantly higher than younger two-year students. Of the four factors, it received younger two-year students' lowest rating. This, again, reflects the difference between students who reside at a school and those who commute to it. Campus Comfort showed four-year students' interest in establishing themselves in a new, and comfortable location, something that younger two-year students did not want to do. No Life Disruptions was the factor most important to two-year students, but was of little importance to four-year students. This factor emphasized the importance of maintaining the status quo in terms of friends, employment, and parental approval. It was no wonder that four-year students, who appeared to desire change, did not give this factor high ratings and that younger two-year students did.

A discriminant analysis using the four factors discussed above and low cost (a single item), correctly classified 80% of two-year students and 90% of four-year students as two-year and four-year students, respectively. An examination of the linear discriminant functions or weights revealed the factors most important in the classification of two-year and four-year students (See Table 11). The equation for two-year students gave the most weight to low cost and No Life Disruptions, and the least to Campus Comfort. In contrast, the equation for four-year students assigned the most weight to Campus Comfort and Academic Quality.

Table 11

Results of Two Discriminant Analyses: Discriminant Function Weights

Function 1: Choice Factors

	Young	
	2 Year	4 Year
Constant	-1.3578	-1.3716
Academic Quality	.03604	.05501
Social Opportunity	.03528	.04684
No Disruptions	.06952	.02909
Campus Comfort	.01482	.07947
Low Cost	.07761	.02034

Function 2: Student Characteristics

	Young	
	2 Year	4 Year
Constant	-17.3811	-25.8988
HS GPA	11.0441	14.0290
SES	.2709	.1968
Aspirations	.6442	.8305

A second discriminant analysis, using the traditional college choice factors high school grade point average, socioeconomic status, and future aspirations, was performed for comparison purposes. This combination of factors correctly classified 73% of two-year students, and 79% of four-year students. High school grade point average was by far, the highest weighted item in this function (see Table 11). Although the combination of grade point, SES, and aspirations did not perform poorly in classifying students' choices, the combination of choice factors and low cost was clearly better. Choice factors were better able to capture the important elements of students' college decisions, and to distinguish between the choice of the younger college bound students.

Knowledge About College/Univeristy Selected

Determining how much students knew or what perceptions (or misperceptions) they held about their institutions provided further insight into the choice process, and also helped to assess the role of heuristics in college choice. Knowledge about institutions was examined in a number of ways. Items of personal fact were used to gain insight into students' choice of institutions, as well as their perceptions about the institutions they chose. Second, the accuracy of information students gave when answering questions of fact provided a clear picture of the amount of information students possessed about their chosen college/university. Last, the cross-referencing of knowledge items with choice items helped to

determine whether or not students had information about those choice items they reportedly used in their college decisions. If decisions were not based on fact, (i.e., if students knew little about their schools, and had little or no information about items they reportedly used in their decision) then the argument that heuristics played some role in students' decisions would be strengthened.

Personal Facts. Analysis of personal facts provided insight into students' perceptions about their own and others' choices, the characteristics of their own and others' institutions, and their own characteristics. Students' descriptions of choice often characterized others' choices as different from their own. Loyola was the first or second choice of a majority of its students. They, in turn, assumed that other Loyola students felt similarly on the whole, but that Loyola was more of a second choice school than a first choice school for others. Older Oakton students reported that Oakton was either their first or only choice; however, they perceived the choices of others at Oakton differently. Other Oakton students, they concluded, also thought of the school as a second choice or safety school. (See Table 12). It would be possible to have constructed many different scenarios for younger Oakton students based on the way they described their choices. Almost equal proportions considered Oakton their first, second, or only choice. Their descriptions of others' choices revealed that Oakton was also perceived as a safety school or last resort. In sum,

Loyola students viewed their school as a desirable choice, more so for themselves than others. Older students felt that Oakton was a "first choice" school for themselves, but recognized that it might not be so for others. Younger Oakton students held a variety of opinions about their school ranging from first choice to last resort.

Asking students to list colleges of comparable quality to their own yielded information about the salient dimensions or vital characteristics students looked for in a college/univeristy. In terms of quality, two-year students compared Oakton to other area community colleges, such as Harper or Triton. Loyola students listed Marquette and DePaul as institutions of comparable quality. The salient characteristics of both Loyola and Oakton are therefore institution type (i.e., two-year public, or four-year private and Catholic), and location (i.e., suburban or urban), both items previously noted as important in students' decisions; type was more important to four-year students, and location was important to all students.

Most students were attending a college where friends or family had attended or are currently attending. Younger students more than older students, tended to be at institutions where other family members have also gone. The majority of older and younger two-year students and four-year students were going to schools where they had friends, although younger two-year students were more likely to have selected this item. A smaller, but still sizable percentage of

Table 12

Students' Responses to Knowledge Questions: Personal Facts

Percentages

	Older	Younger	
	2 Year	2 Year	4 Year
College Choice of Others			
First Choice	33%	13%	38%
Second Choice	13%	31%	52%
Only Choice	40%	20%	10%
Safety School	13%	24%	0%
Last Resort	0%	11%	0%
Own College Choice			
First Choice	70%	25%	61%
Second Choice	0%	25%	31%
Only Choice	30%	28%	8%
Safety School	0%	9%	0%
Last Resort	0%	12%	0%
Number of Colleges Thought to be of Comparable Quality			
Average	.61	.73	1.2
Majors			
Liberal Arts	9%	33%	40%
Business	18%	24%	5%
Pre-Professional	6%	4%	42%
Vocational	9%	0%	0%
Undecided	56%	29%	13%
Family			
Family Who Attended School	20%	35%	28%
Cost of College			
Perception of Own Cost (1-5 Scale 1=Much Lower 5=Much Higher)	1.6	1.5	3.4
Estimated Average Cost	$7562	$5516	$9325
Financial Aid			
Percent Receiving Financial Aid	13%	2%	45%
Reputation of School			
Party School	0%	7%	0%
Serious Academics	43%	7%	89%
Commuter School	57%	51%	5%
Athletics	0%	12%	3%
Good Clubs/Activities	0%	22%	3%
Friends			
Friends Also Attend	47%	75%	65%
Average Number of Friends	5	8	4
Living Situation			
On Campus	0%	0%	62%
Off Campus - Family	70%	98%	35%
Off Campus - Friends	7%	2%	0%
Off Campus - Alone	23%	0%	2%

older students were going to school with their friends. Although students attended with friends, it did not appear that they were in school to "party." Loyola students overwhelmingly characterised its reputation as serious academics. The majority of both younger and older two-year students labeled Oakton a commuter school, but older students also viewed it as serious academically, and some younger students saw Oakton as a place to become involved in athletics or activities. Loyola students attention to academics may have been related to their academic majors; few Loyola students were undecided about their majors, and many were in pre-professional curricula. It should also be remembered that academic reputation was something that was considered in the decisions of the majority of Loyola students and was weighted very heavily in their decisions.

It was not surprising that the majority of younger four-year students lived on-campus, or that all two-year students lived off-campus. Residence may also have been a factor in perceptions of cost. Oakton students rated their cost as below the average cost for college and low cost was an item of great importance to them. Loyola students, on the other hand, rated their cost of college as slightly above average. Four-year students perceived the average cost of college as higher than either younger or older two-year students, perhaps because they considered the additional expense of residence or considered a more expensive type of school (i.e., private).

Accuracy. Overall, students possessed little information about the colleges/universities in which they were enrolled. Information about college admissions status and students' academic qualifications were somewhat more well known than many other facts. College admission status was known by more two-year than four-year students (see Table 13). The majority of older two-year students knew the admissions status of their college. A slightly smaller proportion of younger two-year students and even fewer four-year students knew this fact. Although knowledgeable about their college's admissions category, older students tended to be relatively unaware of the academic abilities of their fellow students. Younger, four-year students were most in tune with this kind of information. The majority of four-year students knew the average high school class rank of entering Loyola students, and over one-third knew the average high school GPA of new students. In contrast, very few older two-year students knew the high school grade point average or average class rank of their fellow students. Younger two-year students possessed a mix of information; less than half knew the rank of newly enrolled Oakton students, but almost none knew incoming students' mean grade point average.

All groups of students were equally unaware of the sizes of their schools. Most did not know facts about institution size such as total number of students attending, average class size, or the ratio of faculty to students. Less than 10% of students in any

Table 13

Accuracy of Students' Information About Their Institutions

	Older 2 Year	Younger 2 Year	Younger 4 Year
College Admissions Category			
Percent Accurate	75%	41%	23%
Perceptions of Student Quality			
Accuracy of Students' GPA	10%	2%	38%
Accuracy of Students' Rank	12%	40%	65%
Size of School			
Accuracy: Size of School	0%	2%	7%
Accuracy: Average Class Size	5%	22%	20%
Knowledge About the Major			
Hours Required for Major	18%	35%	40%
Faculty in Discipline	2%	4%	2%
Courses in Major	0%	2%	0%
Building/Division of Major Subject	0%	2%	27%
Percent Having Some Knowledge	20%	38%	40%
Mean Knowledge Score (0-4)	.20	.42	.58
Financial Aid			
Knowledge of Own Aid	100%	100%	100%
Knowledge of Percent Receiving Aid	0%	4%	12%
Graduates			
Graduates Who Went to Graduate/ Transfer School	6%	23%	42%
Mean Knowledge (0-12 scale)	.36	.51	1.57
Percent Knowledge	6%	18%	38%
Graduates who Began Careers	12%	14%	50%
Mean Knowledge (0-9 scale)	.20	.40	1.17
Percent Knowledge	12%	12%	42%
Extracurriculars			
Expressed Interest	6%	24%	90%
College Has Extracurriculars	100%	100%	62%
Faculty			
Contact With Faculty	17%	24%	13%
Information About Contact	0%	9%	0%
Know of Faculty	3%	16%	3%
Information About Faculty	0%	4%	0%
Academic Reputation			
Knowledge of Faculty, Graduates, or Major	26%	60%	65%
Mean Knowledge Rating (0-28)	.26	.60	.65
Standard Deviation	.44	.49	.48

group were able to accurately report the number of students enrolled at their school. Similarly, none knew or could accurately estimate the ratio of faculty to students. Younger two-year and four-year students were somewhat more accurate in their estimates of average class size than older two-year students.

Students' knowledge about the components of their major fields of study (i.e., hours required, number of courses offered, number of faculty in department and department location) was equally poor for all groups. Students with declared majors were unable to provide much of the information requested. Practically no students (those with declared or intended majors) knew how many faculty taught in their departments or the number of courses offered in their major. More four-year students than either group of two-year students knew how many hours were required for their majors, and the location of their departments.

Students knew little about their schools' distribution of financial aid, but they were aware of their own finances. The percentage of students who received financial aid from the school or other sources was unknown to most students. All students who received financial aid, however, knew the amounts and sources of their financial support.

Although in some cases students had more information about graduates than information about their majors, few persons who reported knowing a graduate could provide <u>all</u>, or sometimes <u>any</u>, of

the information requested. Larger percentages of four-year students than either group of two-year students reported knowing graduates. Four-year students, on the whole, provided more information about the graduates they knew, but some had absolutely no knowledge about a graduate (although these percentages were not large). Far fewer older students knew a graduate, but all had some amount of knowledge about these persons, even though their mean knowledge score was very low. In terms of knowing graduates and providing information about them, younger two-year students were somewhere in the middle. They knew more graduates who went on in school than older two-year students, but not all could provide information about graduates. Their mean knowledge score was slightly higher than that of older two-year students, but less than that of four-year students. T-tests between group means were not calculated because of the small number of responses.

This same pattern of actual knowledge and reported knowledge held true for reports about graduates who began careers. More four-year students reported knowing graduates and had more information overall than both groups of two-year students, but as a group had the largest percentage of persons with absolutely no information. A relatively small percentage of older students reported knowing a graduate who began a career, and <u>all</u> had some information to support their claims, although they provided less information than younger four-year or two-year students. Again,

younger two-year students were in the middle. Fewer knew graduates than four-year students, and a very small proportion could not provide information about a graduate, but they tended to have more knowledge overall than older two-year students.

Students' knowledge of faculty was also extremely poor. Although between thirteen and twenty-four percent of students reported having knowledge of faculty, almost none could provide any substantive information about them. Only four percent of younger two-year students who claimed they knew a faculty member provided any information about that faculty member. Older two-year students and four-year students provided no justification for their responses. Rarer still was contact with faculty. Again, only younger two-year students had any contact with faculty that was substantiated. Knowledge scores were not calculated because of the dearth of informed responses.

Students were much more knowledgeable about the extracurricular activities offered by their institutions than they were about the faculty. The majority of four-year students expressed interest in participating in extracurriculars at their institution; however, a sizable proportion planned to participate in activities not offered by their school (i.e., they did not have accurate information about activities). In contrast, fewer older and younger two-year students expressed interest in extracurricular activities, but all knew the activities that their college offered.

For the purposes of this research, knowledge of a college's or university's academic reputation consisted of the sum total of information a student possessed about the institution's faculty, academic programs and graduates. Based on the information just provided about students' knowledge of these components of reputation, it should be evident that many students may have known a tidbit or two about the academic reputation of their schools, but few possessed what would be considered full, well-researched knowledge of their institutions. The majority of younger two-year and four-year students knew at least something about their institutions, but much smaller percentages of older two-year students knew about their school (see Table 13). Despite the fact that fairly sizable percentages of students knew something about the institutions in which they had enrolled, the amount of information they possessed was minimal. The mean "knowledge score" for reputation (knowledge of faculty, graduates, and the the major) had a maximum of 28 points. All three groups' mean knowldege scores for reputation were below 1.0.

Information Verification. Information selected for use in the choice decision was cross-referenced with information provided to corresponding knowledge questions to ascertain whether or not students had knowledge to substantiate the items they selected as part of their college decisions. The items students selected (item selected vs. items not selected) were matched with the information

students possessed about the items (has information/does not have information). Even in the cases where accuracy was an interval level variable it was coded as a dichotomous category for the purposes of crosstabulation.

Students used items in their decisions about which they had no factual information, but also did not use items about which they did have information (see Table 14). There were cases, mainly in the areas of reputation and image (i.e., excellent faculty, graduates get good jobs, academic reputation), where students reported using an item as part of their choice but had no substantial information or facts that would justify its use in decision making. For example, good program in my major was chosen by 28% of students who had no information about their major. Similarly, 26% selected class size, but did not know the average class size at their institution. All persons who selected excellent faculty as a consideration in college choice failed to provide information about contact with or knowledge of college faculty. (See Table 14)

Even an analysis of the most highly rated items (i.e., those which received a rating of 20 by one out of five students) revealed that students often had little information about items extremely important to them. Academic repuation and good program in my major were both highly rated by a large number of students, yet only 9% of students who awarded that high rating could provide any information about their institutions' academic reputations, and only 8% had

Table 14

Crosstabulation: Item Selection and Item Information

	Selected		Not Selected	
	Info	No Info	Info	No Info
Academic Reputation	30%	21%	21%	27%
Good Program in Major	18%	28%	15%	39%
Family Tradition	44%	2%	48%	4%
Excellent Faculty	0%	19%	3%	77%
Graduates Get Good Jobs	10%	24%	11%	56%
Graduates Go To Good Schools	7%	14%	15%	64%
Former Students' Advice	14%	15%	34%	50%
HS Teachers' Advice	8%	3%	34%	54%
Friend's Advice	19%	2%	59%	19%
HS Counselor	12%	2%	40%	46%
Employer Suggestion	1%	1%	28%	70%
Parent's Suggestion	32%	1%	43%	24%
Retain Employment	12%	5%	21%	62%
Available Aid	9%	3%	9%	78%
Quality of Students	5%	16%	12%	67%
Friends Here	15%	5%	49%	31%
Extracurriculars	23%	0%	75%	2%
Size (# Students)	4%	4%	35%	58%
Size (Class)	10%	26%	8%	56%

information about their majors. It should also be remembered that knowledge was defined in the broadest possible sense.

In many cases, subjects had information that they did not use. That is, persons did not select an item for use in their decision even though they had information about it. This was particularly true for items such as the advice of others, planned activity in extracurrculars, and friends who were also attending. Many more students consulted with parents, teachers, counselors, and friends than selected the advice of those persons as items in the college decision. As might be expected, very few persons who did not consult with a specific person reported that this person had been influential in their decision. In addition to excluding other's opinions in their decisions, students did not include their knowledge of extracurriculars and plans to participate in them, and knowledge that friends were also attending the school in their decisions. Seventy-five percent of students knew of extracurriculars in which they planned to participate, but did not select the availability of extracurriculars as an item for consideration in their college decision. Similarly, almost half of students did not select the item friends were also attending, but had friends who were also attending.

Additional comparisons were made between students who selected the advice of significant persons (i.e, friend's advice, parent's suggestion) as an item in their college decision and those who did

not. T-tests were used to examine the differences in students' assessments of the favorability of significant persons' towards their institution (see Table 15). Overall, there were few differences between students' ratings of the favorableness of significant others. The two notable exceptions were friends and high school counselors. Persons who considered the advice of friends had friends who were more favorable about their choice than those who did not take into account their friends' advice. Along those same lines, the advice of a high school counselor favorable to the institution was included in the college decision, while the less favorable opinion was not. This suggests that positive information, or perhaps confirmatory information was more likely to be used in the college decision than information which contradicted one's own choice or opinion.

In general, it can be concluded that students knew very little about the college/university they had selected. Students often reported using items in their decisions about which they had little or no information. This was particularly true for reputation and quality items such as strong academic reputation and good program in my major. These items were more often included and heavily weighted in the decisions of four-year students. Also, students had information, particularly about the opinions and plans of significant others, which they did not report as having influenced decisions. Taken together, these finding suggests that students may

Table 15

Item Selection and Others' Favorableness Towards the Institution

Means and T-Tests

	Item Selected	Items Not Selected	t	df
Former Student's Advice	4.3	4.1	-.63	56
HS Teacher's Advice	4.0	4.1	- .23	49
Friend's Advice	4.2	3.7	-2.11*	91
HS Counselor's Advice	4.6	3.9	-2.39**	60
Parent's Suggestion	4.3	4.2	- .58	82

*p<.05 **p<.01

be reporting what they considered to be a "good decision" rather than their "real" decision, and/or were influenced by factors of which they were unaware. Based on students' reports of how they made decisions and the knowledge they had about their institutions, it seems worthwhile to examine the evidence for the use of heuristics in the college decision.

Use of Heuristics

Data from both the survey and the experiment provided insight into students' use of heuristics in college decision making. Using survey data, heuristic processing was assessed indirectly through correlations between students' judgments of similarity and predictions about the future. T-tests were also used to examine differences between groups' ratings of similarity, and differences between their predicted likelihood of success, satisfaction, liking, and graduation at home and "other" institutions. Data from the experiment provided a direct test of students' use of the heuristics representativeness and availability when making decisions about college.

Similarity and Likelihood. If using the representativeness heuristic to make decisions about college, students should have perceived themselves as more similar to students at their own institutions and institutions of the same type, than to students from the other type of institution. Students made several judgments of similarity between themselves and the average student at their own school (e.g., Loyola/Oakton), and between themselves and the

average students at both "types" of schools (e.g., two year and four year). Students judged their similarity to other students in five areas: aspirations, academic and social backgrounds, abilities and interests.

As predicted, two-year students saw themselves as relatively similar to the average student at a typical community college, but four-year students did not. Two-year students' ratings of similarity (i.e., self to the average student at a typical community/junior college), were higher than four-year students' across all dimensions (See Table 16). Although younger two-year students' ratings were significantly higher than those of four-year students, they tended to be only slightly above the midpoint of the scale (around 6), not indicative of strong perceived similarity. Differences were most pronounced in the areas of ability and aspirations. Community college students rated their abilities and aspirations as more similar to those of the average community college student than four-year students. Self-reported information about past academic performance and future plans supported these perceptions, as groups differed both in their past levels of academic performance (i.e., ability) and their aspirations.

Older two-year students, on the other hand, did not rate themselves as highly similar to the average community college students. Older and younger two-year students' similarity ratings differed on three of five dimensions: interests, aspirations, and abilities. Younger two-year students reported more similarity

Table 16

Differences in Comparison Ratings: Similarity of Self to Average Student at a Typical Two-Year College

Similarity	Older 2-year	Younger 2-year	Younger 4-Year	t_1†(72)	t_2‡(83)
Interests	4.4	6.2	5.3	-3.2**	2.3*
Abilities	5.0	6.2	4.9	-2.1*	3.2***
Academic Bkgd	4.8	5.7	4.9	-1.8	2.0*
Social Bkgd	5.4	6.3	5.4	-1.7	2.1*
Aspirations	5.0	6.5	5.1	-2.4**	3.2**

*p<.05 **p<.01 ***p<.001

†t1 comparison of older and younger two-year students

‡t2 comparison of two-year and four-year younger students

Scale Range 1-9; 9 = Very Similar, 1 = Very Different

between themselves and the average community college students than did older, two-year students with regard to all three dimensions (see Table 16). Self-reported information somewhat confirmed students' perceptions, at least in terms of ability. Older students had demonstrated higher levels of academic ability (i.e., higher high school grade point averages) than younger students, but it would be difficult to know if this was their perception as well.

Consistent with what was predicted, four-year students rated themselves as fairly similar to the average student at a typical four year school; however, so did younger two-year students (see Table 17). Younger two-year and four year-students both held similar perceptions about how they compared to the average student at a typical four-year school, although four-year students' ratings tended to be slightly higher. The only significant difference was in the area of interest. Four-year students rated their interests as more similar to those of the typical four-year student than did two-year students. As younger two-year students often plan to transfer to four-year schools, these similarities may not be completely inapproriate or inconsistent with the notion of representativeness.

In contrast, older two-year students did not see themselves as at all similar to four-year students. They appeared to believe they had little in common with the average student at a four-year school because their ratings for all dimensions were below the midpoint of

Table 17

Differences in Comparison Ratings: Similarity of Self to Average Student at Typical 4-year

Similarity	Older 2-year	Younger 2-year	Younger 4-Year	t_1†(72)	t_2‡ (83)
Interests	4.3	6.2	7.0	-3.4***	-2.53**
Abilities	4.4	6.3	6.7	-3.8***	-1.25
Academic Bkgd	4.1	6.0	6.5	-3.9***	-1.09
Social Bkgd	4.5	6.1	6.5	-3.0**	-1.23
Aspirations	3.9	6.2	6.5	-4.4***	- .64

*p<.05 **p<.01 ***p<.001

†t_1 comparison of older and younger two-year students

‡t_2 comparison of two and four-year younger student

Scale Range 1-9; 9 = Very Similar, 1 = Very Different

the scale (5). Older two-year students' similarity ratings were significantly lower than younger two-year students as well (See Table 17). Differences occurred across all dimensions.

Older two-year students did not see themselves as particularly similar to the average Oakton student either. Both older and younger two-year students judged their similarity to the average student at Oakton, and assessed their likelihood of happiness, satisfaction, success, and graduation at Oakton. Older two-year students perceived that their academic and social backgrounds, interests and aspiration were all significantly less similar to those of the average Oakton student than did younger two-year students (see Table 18). Again, younger two-year students similarity ratings were not extremely high, but rather slightly above midpoint (i.e., most ratings were 6 or above; the midpoint was 5). The only dimension about which students' ratings did not differ significantly was ability.

Despite differences in their perceptions of similarity to the average student at Oakton, older and younger two-year students mostly agreed on their perceptions about the future, both at Oakton and at a four-year institution. Younger and older students held the same views about their prospects for happiness and satisfaction at Oakton (see Table 19 A). Even though older two-year students' likelihood ratings for happiness and satisfaction were slightly higher than younger students', these differences were not significant.

Table 18

Differences Between Older and Younger Two-Year Students' Comparison Ratings: Similarity of Self to the Average Oakton Student

	2 Year		
Similarity	Older	Younger	t (df=73)
Interests	4.9	6.1	-2.4**
Abilities	5.6	6.3	-1.4
Academic Background	4.1	6.1	-4.6***
Social Background	4.8	6.0	-2.3*
Aspirations	4.7	6.0	-2.4**

*p<.01 **p<.01 ***p<.001

Scale Range 1-9; 9 = Very Similar; 1= Very Different

Older and younger two-year students, however, held quite different views about their future success at and graduation from Oakton. Older two-year students rated their likelihood of success at Oakton significantly higher than younger two-year students. On the other hand, younger students predicted their likelihood of graduation as significantly greater than older students. Apparently older students did not define graduation as success.

When rating their likelihood of success, satisfaction, happiness, and graduation at a four-year school, a different pattern of similarities and differences occurred. Unlike their perceptions of their futures at Oakton, both groups were similar in their predictions of success at and graduation from a four-year school. Both groups of students thought they would graduate from and be successful at a four-year school. Students' ratings of future happiness and success differed. (See Table 19 B). Younger two-year students felt they were more likely to be happy and satisfied at a four-year school than older students.

In summary, four-year students, as predicted, perceived themselves as dissimilar to the average two-year student, and somewhat more similar to the average four-year student. Younger two-year students, however, saw themselves as fairly similar to students at their own institution (i.e., Oakton), to the average student at a similar type of institution (i.e., two-year college), as well as the average student at a four-year institution. Older

Table 19 A

Comparison of Older and Younger Two-Year Students Likelihood Ratings

Likelihood at Oakton

Likelihood	Two-Year Older	Younger	t (df=73)
Happy	7.5	6.7	1.7
Satisfied	7.6	7.0	1.4
Successful	8.1	7.4	2.9**
Graduate	5.2	6.6	-1.9*

Table 19 B

Comparison of Older and Younger Two-Year Students Likelihood Ratings

Likelihood at Four-Year School

Likelihood	Two-Year Older	Younger	t (df=73)
Happy	5.6	7.2	-3.0**
Satisfied	5.6	7.2	-3.0**
Successful	6.4	7.1	-1.5
Graduate	6.6	7.6	-1.7

---

*p<.05 **p<.01 ***p<.001

Scale range 1-9; 9 = Very Likely; 1 = Very Unlikely

students, in contrast, perceived little similarity between themselves and any of the aforementioned "types" of college students. In general, they did not appear to identify with the college going population.

It was also hypothesized that heuristic processing would be evidenced by high correlations between ratings of similarity and predictions about the future. That is, students' perceptions of similarity to other students at an institution would lead them to be more optimistic about their future success, satisfaction, happiness, and eventual graduation from that institution. Two sets of correlations were calculated between similarity ratings and predictions, one for ratings of similarity and predictions of the future at the comparison school (two-year for Loyola students, and four-year for Oakton students), and one set for ratings of similarity and predictions about the future at the "home" school.Separate sets of correlations were calculated for each group (younger two-year, older two-year and younger four-year students).

Similarity to students at comparison schools and predictions of future events there did not correlate highly. Two-year students perceptions of similarity to four-year students had little to do with their perceptions of their future at a four-year school. Four-year students' perceptions of their similarity to students at two-year schools were somewhat related to their predictions about their future at a two-year school, particularly about their eventual

satisfaction, but consistent patterns were not evident. (See Appendix D).

Students' assessments of their similarity to other students at their own institution did bear some relationship to their estimated likelihood of eventual satisfaction at and graduation from those institutions. No consistent pattern of similarity and likelihood emerged for all student groups. For older two-year students, satisfaction at Oakton was related most strongly to their perceptions that their abilities, aspirations, social background, and academic background were similar to those around them. For younger two-year students, satisfaction correlated with similar interest and abilities. There is, therefore, some evidence that satisfaction is related to similarity, at least among two-year students.

Among younger two-year and four-year students, likelihood of graduation correlated with both similar ability and aspirations. Ability was most stongly related to likely graduation for four-year students, while similar aspirations were more modestly so. For two-year students, similar ability and aspirations were both related to graduation. It is interesting to note that ability and aspirations were two variables on which younger two-year and four-year students differed significantly, and which have been found in other research to be highly predictive of matriculation.

Based on survey data, evidence of heuristic processing was suggestive at best. The experiment, however, directly assessed heuristic processing and provided evidence to support the contention that students use heuristics when making judgments about college life.

After reading each of four college descriptions that varied in terms of both availability and representativeness, students made judgments about their likelihood of writing for more information, applying to and going to the college described, and once there, liking it, being successful and satisfied. They also assessed their similarity to the students described, their level of interest in the description, and its informativeness. Descriptions varied in terms of both availability and representativness. Data were analyzed using a 2-way factorial analysis of variance design that tested for the main effects of availability and representativeness, as well as their interaction. As no significant interactions were found, no information pertaining to the interaction of availability and representativness will be reported.

Availability. Availability of college descriptions played a role in both the likelihood of students approaching a college (i.e., applying), and attending a college. (See Table 20). Students reading available descriptions (i.e., those with pictures and non-statistical descriptions) were more likely to apply to and

Table 20

Predicted Likelihood and Ratings of Similarity, Interest and Informativeness: Available and Not-Available College Descriptions

Likelihood	Available	Not Available	F (1, 460)
(Scale 1-9; 9=Very Likely)			
Write	5.98	5.65	2.13
Apply	6.11	5.66	3.87*
Go	5.92	5.43	4.60*
Success	6.92	6.61	2.94
Satisfaction	6.22	5.66	6.92**
Liking	6.27	5.70	7.02**
Similarity			
(Scale 1-9; 9=Very Similar)			
Similar	5.14	4.95	.66
College Description			
Interesting	6.30	5.82	5.45**
(Scale 1-9; 9=Interesting)			
Informative	6.57	6.56	.01
(Scale 1-9; 9=Informative)			

*p<.05 **p<.01

attend that college than those who read descriptions that were not available (i.e., those with tables and statistics in the text). After reading an available description, students also predicted that once at the college they would feel satisfied and like being there. Availability, however, did not significantly affect students likelihood of writing for further information about a school or likelihood of success at that school - although trends are that way.

Available descriptions were also found to be more interesting than non-available ones. Availability did not, however, have an effect on students' perceptions of similarity to other students at the college described, or their perceptions of how informative/uninformative a description was. These findings are important because interest is part of the availability construct, similarity and informativeness are not.

Representativeness. Representativness, students' perceptions that they were similar to the average student at the college described, played a very significant role in students' predictions about their interest in attending the college, the steps they would take towards gaining admittance, and their eventual attendance, as well as their predictions about their feelings and actions once at the institution. Representativeness produced significant differences across all ratings of likelihood, similarity and interest. Students were more likely to write, apply, and attend a school if they perceived themselves as similar in some way to students at that school (see Table 21).

Table 21

Predicted Likelihood and Ratings of Similarity, Interest, and Informativeness: Representative and Non-Representative Descriptions

Likelihood	Representative	Not Representative	F (1, 460)
(Scale 1-9; 9=Very Likely)			
Write	6.72	4.90	64.54****
Apply	6.99	4.75	97.89****
Go	6.81	4.53	100.52****
Success	7.30	6.22	36.61****
Satisfaction	6.99	4.87	100.42****
Liking	7.04	4.92	96.46****
Similarity			
(Scale 1-9; 9=Very Similar)			
Similar	6.36	3.96	134.47****
College Description			
Interesting	6.34	5.77	7.96**
(Scale 1-9; 9=Interesting)			
Informative	6.70	6.44	2.03
(Scale 1-9; 9=Informative)			

*p<.05 **p<.01 ***p<.001 ****p<.0001

Students reading representative descriptions (i.e., descriptions in which the students were of similar age to the subject) rated their likelihood of writing to the college higher than students who read non-representative descriptions. Following a representative description, students' predicted likelihood of both application and attendance was higher than following a non-representative description. Likelihood of success, satisfaction and liking for an institution were all significantly influenced by reading a representative college description as well. Students reported they would be more likely to be satisfied at a college where the majority of students were of similar age, than at a college where most persons were not of similar age. Ratings of liking were also affected by representativeness. Students predicted that they would be more likely to like an institution following a representative description than a non-representative one. In regard to the similarity measure, students perceived themselves as more similar to the same aged students (i.e., the representative group). Representative descriptions were also thought to be significantly more interesting than non-representative descriptions, but they were not thought of as more informative.

After having read all four college descriptions (and having made the corresponding predictions and ratings), students were tested for recall of college descriptions. Students were asked to recall the details of the description most memorable to them.

Recall was predicted to be highest for descriptions that were most vivid (i.e., available), or perhaps most salient (i.e., recent). The recall measure, however, revealed that students remember representative descriptions most frequently. In most cases it was impossible to discern to which description students referred because they did not differentiate between the available and representative description, and the non-available and representative description. Most replies consisted of a statement like "the college where everybody is just out of high school," or "the college where people waited awhile before going to school." Almost no students recalled a specific description that they could refer to by number (i.e., "the first description I read"), or could provide enough detail so that the description could be identified. Even fewer students mentioned the picture, the chart or the prose style (i.e., the availability manipulation) when identifying their most memorable description. Whether the description recalled was <u>both</u> representative and available was not evident, but it did not appear that availability was the major factor in students' recall.

DISCUSSION

The results of this research and their implications will be discussed in the sections that follow. Specifically, what the results of this study reveal about students and college choice, and how cognitive heuristics can help to more fully explain students' choices will be examined. The study's limitations, and directions for future research will also be discussed. First, the major findings of this study will be reviewed.

Overview of Research Results

The major purpose of this project was to expand what is currently known about college choice by including a broader population of students, and developing a deeper, more psychological conceptualization of choice. To accomplish this, the choices of two-year college students - both traditional and non-traditional college age, as well as the choices of traditional college age four-year students were examined. The inclusion of older students, and two-year students represents a significant expansion of college choice research, as most previous work has studied the choices of traditional college age four-year students exclusively. Further, students' use of cognitive heuristics was incorporated in the investigation in order to develop a fuller, more psychological

conceptualization of the college choice process. Cognitive processes, such as heuristics, have been overlooked in past research. The inclusion of a broader population of students, and more psychological concepts to describe their choices informed the development of the major questions this research explored.

At the outset of this research, several questions were posed concerning: 1) whether different types of students made different choices, 2) how choice might be predicted best, and 3) how cognitive heuristics might help to explain college choice more fully. Overall, the results indicate that different types of students made different kinds of choices. Not surprisingly, students differed in the number and kinds of search activities they performed, as well as in their selection and weighting of attributes used in the college decision. The choices of younger two-year and four-year students were predicted best by a combination of weighted choice factors (i.e., factors formed from choice items), rather than students' characteristics. In addition, results of the experimental investigation suggested that students' judgments about their likelihood of college enrollment, and certain behaviors and feelings once enrolled are influenced by the availability and representativeness heuristic properties of college descriptions. To understand these issues, a more thorough review of the results of the research will begin with an examination of the differences between students and their college decisions.

Differences in Students' Characteristics and Choice Processes

Previous research on college choice primarily focused on the relationship of students' characteristics to their choices of college and narrowly defined college students as those who selected and attended four-year institutions, and who were of traditional college age (18-24 years old). Despite the propensity of most research to investigate only traditional students, and their characteristics and choices, several researchers have called for a broader conceptualization of choice. For example, Hossler (1985) indicated that there appeared to be college choice differences between two-year and four-year students, although little research had addressed these differences. Similarly, Litten (1982) highlighted the need for developing an understanding of the college choice decisions of a wider variety of students because of the growing diversity in college populations. This research substantiated these assertions.

The present study found that the several types of students were indeed different, not only in terms of their personal characteristics, but also in their college search activities, and in their selection and weighting of choice items. This study also expanded what is known about the choices of older and two-year students, and how they are similar to or different from traditional students (i.e., younger four-year students). Differences in choice appeared to be the result of college type (i.e., four-year or two-year) more so than students' age.

Student Characteristics. This study further delineated past research, confirming but extending what is known about students' characteristics and their choice of college (Hossler, 1984; Chapman, 1984; Zemsky & Oedel, 1983). Students differed in terms of stable characteristics such as academic ability, socioeconomic status, race, and an "unstable" factor - future aspirations. Four-year students had better academic track records and more focused and ambitious academic goals than either younger or older two-year students. Younger two-year and four-year students were similar in socioeconomic status, but younger and older two-year students were not, with younger two-year students being of significantly higher status than older two-year students. In addition, the group of four-year students was more racially mixed than either group of two-year students. These results are consistent with those from previous research, finding that four-year students are of high ability and have more ambitious and focused plans, but do not indicate that two-year students are somehow "disadvantaged."

The Choice Process. Although the relationship between students' characteristics and their college choices has received much attention, it is only one element of college choice. Models of college choice (Chapman, 1984; Hossler, 1985) propose that students select colleges through a series of decisions. This research investigated two elements common to most models of student decision making - the search for information, and the selection and weighting

of items relevant to the college decision. There is some evidence to suggest that four-year students conducted more active searches than two-year students because the majority of four-year students reported that they engaged in more search activities than either group of two-year students. It was evident in all groups, however, that students had also consulted with sources they had not actively sought.

Not only did students' information searches differ, their choices differed as well. Two-year students and four-year students were very different in their selection and weighting of college attributes. Two-year students were most concerned with fixed college attributes such as location and cost. Four-year students, in contrast, looked primarily at perceived college attributes such as academic reputation, a good academic program, and the performance of college graduates. They, too, considered fixed college attributes (i.e., type of institution and institution size), but their selections of attributes were different from those of two-year students. These differences are most evident when examining the weightings of summative factors. Four-year students' primary concern was for the academic quality of an institution, while two-year students were most concerned with maintaining the status quo (i.e., not disrupting their lives to go to college.)

Factors Predicting College Choice

Part of the purpose of investigating students' characteristics

and choices has been to identify a set of characteristics that will predict those choices. Past research, however, has focused exclusively on stable student characteristics, and the prediction of college choice based on the match between institutional characteristics and student characteristics (Chapman, 1984; Litten, 1982; Zemsky & Oedel, 1983 among others). The idea that student characteristics are the best predictors of college choice was not supported by this research. Although two-year and four-year students were different with respect to personal characteristics, these characteristics were not the best indicators of college choice. Rather, a discriminant analysis revealed that the choices of younger two-year and four-year students could be distinguished more effectively by a set of choice factors based on students' selection of fixed attributes, perceived attributes and opinions of significant others than on students' characteristics or academic plans.

Role of Cognitive Heuristics in College Choice

The above finding highlights the need to look further into students' decision processes because what previously had been perceived as good predictors of choice did not predict as well as other, somewhat less stable factors. Data from this study support previous research (Hossler, 1984; Stern, 1965; Chapman, 1981) indicating that students may make poorly informed decisions, and that choice may be influenced by factors other than "solid"

information about an institution. Based on assessments of students' knowledge about their institutions, it is evident that students did not know a great deal about the institutions they had chosen to attend. They purportedly used factors in their decisions about which they did not have information, and did not use items in their decision about which they did have information. Moreover, it also appears students used information selectively. Opinions of more highly favorable sources (e.g., friends and high school counselors) were used in decision making more frequently than the opinions of less favorable persons. Yet even this pattern did not occur consistently for all sources consulted. Taken together, these results raise questions about how students might be making decisions if they do not use factual information to guide their choices.

Although these survey results point out the inconsistencies in students' self-reported choices, an experimental investigation was needed to fully explore the cognitive processes underlying choice which may have produced these inconsistencies, as well as the possibility that students were influenced by factors of which they were unaware and therefore, unable to report. The results of the experimental investigation of choice strongly suggest that students use the availability and representativeness heuristics when making decisions about colleges. Students' judgments about college were influenced by their perceived similarity to students in college descriptions (i.e., representativeness), and by the vividness (i.e.,

availability) of those descriptions. Representativeness, in particular, had a highly significant effect on students' self-rated likelihood of inquiry, application, and attendance, as well as their predicted liking, satisfaction, success and graduation once at college.

Implications of This Research

The results of this research demonstrate and suggest several things about students and their choices that may help to explain, within traditional models of college choice, the college decisions of older and younger two-year students, as well as young four-year students. Furthermore, this research also explored the cognitive processes that underlie choice. Findings about students' limited search for and use of information, combined with evidence that students use cognitive heuristics when making college decisions, offer an alternative conceptualization of students' choices. What this means for models of college choice will be examined first.

Models of College Choice

This study finds that although differences in personal characteristics exist between types of students, they don't explain nor do they accurately differentiate students' choices. Given this, different models of choice are needed to explain the choices of two-year and four-year students.

Two-year and four-year students are different from one another with respect to personal characteristics, the most important

differences being ability and aspirations. Ability (i.e., as measured by high school GPA), aspirations, and socioeconomic status, however, were not the best predictors of choice, although they may play some role in choice. Students with lower grade point averages will have fewer colleges from which to choose than higher ability students; therefore, they cannot afford to be as "choosy" as higher ability students. A lack of clear direction may have also kept two-year students choices somewhat "simpler" because they may not have known what they were looking for from a college/university. This may explain the finding that two-year students looked at fewer, yet more practical, items than four-year students. Although both of these factors may have restricted the choices of two-year students, they do not in and of themselves, explain these choices.

Models of students' college decisions, in addition to examining students' characteristics, have also proposed that part of the choice process in the selection and weighting of attributes. Several researchers (Chapman, 1981; Hossler, 1984; Jackson, 1982) propose that students select attributes, both real and perceived, and decide how important those are in their college decisions. This research provides evidence that two-year and four-year students' choices differ significantly - both in their selection of items and assignment of weights - and that their assignment of weights to items differentiates their choices better than the differences in their personal characteristics. Therefore, choice should be viewed

from the student's perspective and what s/he considers to be important, rather than described and predicted based solely on who the student is.

Cognitive Processes in College Choice

In addition to examining students self-reported decisions, this study also looked at what students may not be able to report, namely, the cognitive processes used to guide and form those decisions. Hossler (1985) has argued that developing a fuller conceptualization of choice, one that looks at cognitive processes in addition to choice behaviors, is important. This research examined cognitive processing in two ways. First, students' reports of their college decision making were "checked" by asking them for in-depth information about the colleges they considered. Second, an experimental decision situation was used to investigate an alternative explanation (i.e., use of cognitive heuristics) for students' choice processes. This research suggests that psychological processes, such as cognitive heuristics, may help to explain students' choices more fully than student characteristics or self-reported decision information.

In general, students' choices are not as rational or thorough as previous research has suggested. It does not appear that students: a) gathered information in an exhaustive way, b) used all of the information they had, c) had all of the information they reportedly used, and/or d) were able to accurately report or

reconstruct their choices.[4] Rather, given the type of information reported, the results of the experimental situation demonstrate that students' judgments of the likelihood of college attendance, and certain behaviors and feelings once enrolled at college are influenced by the availability and representativeness of college material presented. Although measured in a controlled simulation of college decision making, the data provided evidence that students' make judgments based on a) their assessments of how similar they are to other students at an institution (i.e., representativeness), and b) how interesting, vivid or salient the information about the college is (i.e., availability). A direct assessment of heuristic processing during the actual college decision was not made, but the information that students use heuristics in the college decision may help to provide a framework for explaining their searches, use of information, and choices. Each heuristic will be discussed, in turn.

Availability. Several pieces of evidence suggest that students may have used the availability heuristic when looking for and using information. Students' reports of the materials and persons they sought did not correspond to the materials and persons they said they consulted. This suggests that students used sources with whom they were in regular contact (i.e., available sources) rather than searching for new sources of information. This was true particularly of two-year students who conducted more passive searches, and who may have been aided by the community college's

marketing efforts. The college regularly mails information such as class schedules and applications directly to students homes. Also, given a more restricted range of choices, the two-year college itself may have been a highly available alternative.

There was also a tendency for students to include the opinions of others in their decision (i.e., friends and high school counselors) only if those opinions were favorable. Favorable information, or information that confirms ones own opinion is believed to be more informative, and hence, more available than disconfirming information (Wells & Lindsay, 1980). However, students did not always adhere to this pattern.

Simulation. Looking at the items students reported being important in their college decision suggests that students may have used simulation - an extension of availability - when making their decisions. Students using simulation would construct a "going to college" scenario, and determine the likelihood of the event (i.e., going to Oakton College/Loyola University) based on the ease with which the scenario was constructed. Two-year students, for example, weighted highly the No Life Disruptions factor. This may reflect their attempts to construct a plausible scenario because of the items this factor comprises, i.e., maintaining current employment, friends also attending, and parent's suggestion. All items relate to the maintenance of an established pattern of day-to-day living, which suggests that students were trying to determine how easy it

would be for them to make the transition to college. Two-year students did not select items related to more abstract college qualities (i.e., academic quality, excellent faculty) that would suggest they were making a decision about the worth of the college itself.

Representativeness. While two-year students choices showed evidence of simulation, four-year students choices suggested that they may have used representativeness. Using the representativeness heuristic, four-year students would have based their judgments to attend Loyola on their perceptions of how similar they were to the typical Loyola student and how well they would "fit" at Loyola. Students' attention to the Social Opportunity factor indicates that they weighted highly items about the kinds of students attending (e.g., quality of student body, and I can identify with fellow students), and the quality of life at the institution (e.g., extracurriculars offered, social reputation, size). Although this is not direct "proof" that students constructed a prototypic Loyola student or an example of life at Loyola, representativeness does help to explain why students may have focused on and how they used this factor.

Limitations of the Present Research

There are several points to be kept in mind when looking at the results of this research. First, the students' reports of their decision making are reconstructions of their actual decisions.

Because of the cross sectional research design used here, it was impossible to trace students decisions over time. Certainly, students may have been influenced by factors of which they were unaware, and they may also have had difficulty trying to remember their reasons for making a certain decision after the fact. Furthermore, students may report reasons consistent with their prior choices because such apparent rationality is socially desirable. Memory is probably a greater influence on responses than social desirability (i.e., describing a "model" rather than "real" decision), but neither completely account for students' responses because of their reported non-use of information as well as the marked difference in their choices.

A second limitation is that only one school of each type (e.g., two-year and four-year) was included. In addition, comparisons between older and younger four-year students and older two-year and four-year students could not be made because of insurmountable problems in obtaining the participation of older four-year students. Results, therefore, may reflect the idiosyncrasies of students at either institution and cannot be generalized to all students, and do not fully describe and predict the choices of older students.

Last, results provide suggestive evidence that students used heuristics in their college decisions. The experimental situation demonstrates that students use heuristics in simulated situations.

This is consistent with the results of the study which document the erratic way in which students reportedly used and did not use information in their decisions. Taken together, these results suggest that heuristics might account for variations in students' decisions, but there is no direct evidence that these heuristics were used.

Directions for Future Research

This research extended the conceptualization of college choice to include psychological processes such as cognitive heuristics and broadened the conceptualization of "college student" to include two-year and older students. There are several directions that future research might take, both in terms of the methods used, and the concepts studied.

In terms of the sample, the types of colleges included should be broadened so that a variety of colleges are represented. Multiple colleges from each type should also be included. Older students should continue to be included in research on college choice and special efforts made to ensure their participation. Future research projects should consider the use of interviews (conducted in the home), or mailed questionnaires for reaching this population.

A longitudinal design should be considered because it would trace the process of choice more accurately than a cross-sectional design, and would rely less on students' memories. It would be

beneficial conceptually, as it would help to verify whether or not college choice is multi-stage process, and if it is, what occurs at each stage. Also, it would be worthwhile to investigate "the outcome" of choice (i.e., whether or not students graduated from the college, how satisfied they were). Relating the results of the choice to the choice process would improve what is known about the efficacy of various decision processes and judgmental heuristics. If a variety of colleges and student types were included as well, this kind of approach could substantially increase what is known about the college choice process. Care should be taken, however, to develop a method of investigation that would not be highly reactive (i.e., would induce students to report "good decisions" rather than "real decisions").

In summary, this study contributed to what is known about students' college choices in several ways. First, it broadened the definition of "student" to include both older and two-year college students. Second, this research clearly delineated the differences in younger two-year and four-year students' choices, and identified the factors that predict choice best. Last, the study looked at the process of choice in terms of students' cognitions, not just their behaviors, by verifying their self-reported choices with a knowledge test and examining their use of heuristics in a simulated college decision. Through these means, the conceptualization of college choice was expanded by incorporating cognitive heuristics.

FOOTNOTES

1 Attempts were made to recruit older four-year students. This population was very small, and it proved extremely difficult to gain participation from enough students to constitute a representative sample. Moreover, five students included in the sample were deleted from the analysis because of missing data.

2 Initially, an attempt was made to extract factors from the twenty-nine choice items using factor analysis. Principal components analysis extracted ten factors with eigenvalues over one. A number of factor solutions with ten and fewer items were generated but none yielded factors that enhanced the interpretability of these data.

3 Although two nine-point scales (mother's level of education and father's level of education) were combined with a slightly shorter seven-point scale (income), this did not substantially affect the range of the resulting scale (SES).

4 These results also coincide with theories and research on the formation and change of attitudes, and the relationship between attitudes and behavior. Choosing to go to a college might be regarded as the consequence of one's attitude toward that college. It is known from studies on the elaboration

likelihood theory of attitude formation and change (Petty & Cacioppo, 1982) that people differ in their motivation and ability to thoroughly process information about an attitude object. Thus, some students may select a college based upon a rather careful review of its perceived attributes, while others may choose on the basis of minimal, possibly peripheral, cues. The former represents the more rational approach while the latter illustrates the use of heuristics. Along these same lines, research on the impact of attitude accessibility (Fazio & Zanna, 1981) has demonstrated that greater direct experience with an attitude object (e.g., reading about it, "visiting" it) leads to greater consistency between attitudes and actual behavior. In the present case, students who have investigated various colleges thoroughly would be more likely to have potent, accessible attitudes and make choices consistent with those attitudes than would students whose attitudes were based upon less direct experience and knowledge. These attitudinal interpretations are not only consistent with the present findings but suggest several directions for future study regarding motivation and ability to process information, degree of experience, and attitude direction and strength on the college process. (J. Edwards, personal communication, April 1, 1988)

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APPENDIX A

College Decision-Making

1. What was your grade point average for all subjects in high school?
(A=4.0)

   GPA: _____

2. What was your approximate high school class rank?

   Number _____ out of _____

3. What is the highest level of education you plan to complete?

   _____ SPECIALIZED TRAINING OR CERTIFICATE PROGRAM

   _____ TWO-YEAR ASSOCIATE OF ARTS OR SCIENCES (AA, AAS, AS)

   _____ BACHELOR'S DEGREE (BA OR BS)

   _____ MASTER'S DEGREE (MA, MBA, or MS)

   _____ DOCTORAL DEGREE (PHD or EDD)

   _____ OTHER PROFESSIONAL DEGREE (MD, JD, DVM)

   _____ OTHER, _____

   _____ UNDECIDED

4. How do you describe yourself?

   _____ AMERICAN INDIAN OR ALASKAN NATIVE

   _____ ASIAN, ASIAN AMERICAN OR PACIFIC ISLANDER

   _____ BLACK OR AFRICAN AMERICAN

   _____ MEXICAN AMERICAN OR CHICANO

   _____ PUERTO RICAN

   _____ LATIN, SOUTH OR CENTRAL AMERICAN

   _____ WHITE/CAUCASIAN

   _____ OTHER

5. What language did you learn to speak at home?

_____ ENGLISH ONLY

_____ ENGLISH AND ANOTHER LANGUAGE

_____ ANOTHER LANGUAGE

6. What is the highest level of education completed by:

YOUR FATHER	YOUR MOTHER	YOUR SPOUSE	
_____	_____	_____	GRADE SCHOOL
_____	_____	_____	SOME HIGH SCHOOL
_____	_____	_____	HS DIPLOMA OR EQUIVALENT
_____	_____	_____	BUSINESS OR TRADE SCHOOL
_____	_____	_____	SOME COLLEGE
_____	_____	_____	AA OR OTHER TWO-YEAR DEGREE
_____	_____	_____	BA OR OTHER FOUR-YEAR DEGREE
_____	_____	_____	SOME GRADUATE OR PROFESSIONAL SCHOOL
_____	_____	_____	GRADUATE OR PROFESSIONAL DEGREE

7. What was the approximate combined family income (before taxes) of your parents, or if you live independently of your parents, your income (if single) or combined family income (if married) in 1986?

_____ LESS THAN $10,000

_____ ABOUT $10 - 20,000

_____ ABOUT $20 - 30,000

_____ ABOUT $30 - 40,000

_____ ABOUT $40 - 50,000

_____ ABOUT $50 - 60,000

_____ OVER $60,000

8. Is the figure checked above parental income, independent income, or marital/combined family income.

_____ PARENTAL INCOME

_____ INDEPENDENT INCOME

_____ COMBINED FAMILY/MARITAL INCOME

9. What is your gender?

_____ FEMALE

_____ MALE

10. Are you currently married?

_____ YES

_____ NO

11. Have you ever been enrolled in any <u>other</u> college or university?

_____ YES

_____ NO

12. How old are you?

_____ Under 18

_____ 18 - 21

_____ 22 - 24

_____ 25 - 30

_____ 31 - 40

_____ 41 - 50

_____ 51 - 60

_____ 61 or older

13. What is your enrollment status for this semester?

_____ ENROLLED FULL-TIME (12 OR MORE HOURS PER TERM) FOR CREDIT

_____ ENROLLED PART-TIME (LESS THAN 12 HOURS PER TERM) FOR CREDIT

_____ ENROLLED - BUT NOT FOR CREDIT

14. What is your employment status - this semester?

_____ EMPLOYED MORE THAN HALF TIME (OVER 20 HRS/WEEK)

_____ EMPLOYED HALF-TIME OR LESS (20 HOURS OR LESS/WEEK)

_____ HOMEMAKER - NOT EMPLOYED OUTSIDE THE HOME

_____ NOT EMPLOYED BUT WOULD LIKE TO WORK

_____ NOT EMPLOYED BUT DO NOT CARE TO WORK WHILE ATTENDING COLLEGE

15. The decision to attend a particular college is usually influenced by a number of factors. Thinking about your decision to attend Oakton/Loyola, please circle the letter next to each of the factors that you feel influenced your decision. You may circle all that apply. If there are some things that influenced you that you do not see on the list, please write them in under "Other." There are no right or wrong answers, we are interested in your own personal decision and the factors you considered important. After you have finished circling the factors that were important to you, continue with question sixteen (Directions on the following page).

CIRCLE	FACTORS	RATING (See #16 for INSTRUCTIONS)
A	STRONG ACADEMIC REPUTATION	_____
B	GOOD PROGRAM IN MY MAJOR	_____
C	FAMILY TRADITION -OTHER FAMILY MEMBERS ATTENDED	_____
D	EXCELLENT FACULTY	_____
E	GRADUATES GET GOOD JOBS	_____
F	GRADUATES GO TO GOOD SCHOOLS	_____
G	FORMER STUDENT'S ADVICE	_____
H	HIGH SCHOOL TEACHER'S ADVICE	_____
I	FRIEND'S ADVICE	_____
J	HIGH SCHOOL COUNSELOR'S ADVICE	_____
K	EMPLOYER'S SUGGESTION	_____
L	PARENT'S SUGGESTION	_____
M	WILL HELP ME RETAIN CURRENT EMPLOYMENT	_____
N	LOW COST	_____
O	AVAILABILITY OF FINANCIAL AID	_____
P	TYPE OF INSTITUTION (PUBLIC, PRIVATE...)	_____
Q	EXTRACURRICULAR ACTIVITIES	_____
R	SMALL CLASS SIZES	_____
S	INSTITUTION'S SOCIAL REPUTATION	_____
T	INSTITUTION'S RELIGIOUS AFFILIATION	_____
U	SIZE (NUMBER OF STUDENTS)	_____
V	QUALITY OF STUDENT BODY	_____
W	ATTRACTIVE CAMPUS	_____
X	CLOSE TO HOME	_____
Y	I CAN IDENTIFY WITH FELLOW STUDENTS	_____
Z	FRIENDS WERE GOING HERE ALSO	_____
AA	WANTED TO BE AWAY FROM HOME	_____
AB	CONVENIENT LOCATION	_____
AC	FELT COMFORTABLE HERE	_____
AD	COMMUNITY SETTING (URBAN, SUBURBAN)	_____
AE	OTHER _____	_____
		100%

16. For each of the factors you circled on the previous page, please indicate how important it was in your decision to attend Oakton/Loyola. All factors combined should equal 100%, with each one assigned some portion of the total percentage. Put your percentage in the space following the item under the heading marked "RATING."

FOR EXAMPLE - If you chose A, B, C and feel that A "Academic Reputation" is most important and that B "Good Program in my Major" and C "Family Tradition" are less important than a, but equal to each other, then you would assign percentages like this:

A.	ACADEMIC REPUTATION	50%
B.	GOOD PROGRAM	25%
C.	FAMILY TRADITION	25%
		100%

17. People learn about colleges and universities through a variety of sources, please rate each of the following sources in terms of its informativeness about Oakton. If you did not consult with a source, please circle "0" for did not consult.

	Very Informative					Not Very Informative		Did Not Consult
Current Student	7	6	5	4	3	2	1	0
Former Students	7	6	5	4	3	2	1	0
College Catalog	7	6	5	4	3	2	1	0
Admissions Rep	7	6	5	4	3	2	1	0
Brochure	7	6	5	4	3	2	1	0
Barron's or Other Guide to Colleges	7	6	5	4	3	2	1	0
High School Counselor	7	6	5	4	3	2	1	0

18. If you were giving advice to a student who was trying to make a decision about whether to attend Oakton/Loyola or not, from your experience, what two sources of information would you recommend that s/he consult?

SOURCE 1: _____
SOURCE 2: _____

19. How many colleges/universities, other than Oakton/Loyola, did you consider when looking for a college/university to attend?

20. People may engage in a variety of activities to learn more about the colleges/universities they are interested in attending. Which of the following describe the kinds of things you did when looking at colleges/universities? (Check all that apply)

_____ WROTE FOR A CATALOG

_____ WROTE FOR INFORMATION ABOUT A SPECIFIC PROGRAM

_____ WROTE FOR AN APPLICATION

_____ SOUGHT OUT AND TALKED TO FRIENDS WHO WENT THERE

_____ SOUGHT OUT AND TALKED TO ACQUAINTANCES OR FRIENDS OR FRIENDS OF FRIENDS WHO WENT THERE

_____ WENT TO A COLLEGE NIGHT TO TALK TO REPRESENTATIVES OF THE COLLEGE/UNIVERSITY

_____ CALLED AN ADMISSIONS REPRESENTATIVE TO ASK QUESTIONS ABOUT THE SCHOOL

_____ ASKED FOR NAMES OF AREA ALUMNI AND CONTACTED THEM

21. While no one can predict the future exactly, it is often possible to estimate how likely a certain event might be. Please think about your future as a student at Oakton/Loyola. How likely is it that you will, in the future:

		Very Likely								Very Unlikely
A.	BE HAPPY AT OAKTON/LOYOLA	9	8	7	6	5	4	3	2	1
B.	BE SATISFIED WITH OAKTON/LOYOLA	9	8	7	6	5	4	3	2	1
C.	BE SUCCESSFUL AT OAKTON/LOYOLA	9	8	7	6	5	4	3	2	1
D.	GRADUATE FROM OAKTON/LOYOLA	9	8	7	6	5	4	3	2	1

22. How similar do you feel you are to the average student at Oakton/Loyola, in terms of your:

A. INTERESTS

Very Similar — Very Different

9 8 7 6 5 4 3 2 1

B. ABILITIES

Very Similar — Very Different

9 8 7 6 5 4 3 2 1

C. ACADEMIC BACKGROUND

Very Similar — Very Different

9 8 7 6 5 4 3 2 1

D. SOCIAL BACKGROUND

Very Similar — Very Different

9 8 7 6 5 4 3 2 1

E. ASPIRATIONS

Very Similar — Very Different

9 8 7 6 5 4 3 2 1

23. How similar do you feel you are to the average student at a typical junior community college/four-year school, in terms of your:

A. INTERESTS

Very Similar Very Different

9 8 7 6 5 4 3 2 1

B. ABILITIES

Very Similar Very Different

9 8 7 6 5 4 3 2 1

C. ACADEMIC BACKGROUND

Very Similar Very Different

9 8 7 6 5 4 3 2 1

D. SOCIAL BACKGROUND

Very Similar Very Different

9 8 7 6 5 4 3 2 1

E. ASPIRATIONS

Very Similar Very Different

9 8 7 6 5 4 3 2 1

24. How similar do you feel you are to the average student at a typical four-year school/community-junior college, in terms of your:

A. INTERESTS

Very Similar								Very Different
9	8	7	6	5	4	3	2	1

B. ABILITIES

Very Similar								Very Different
9	8	7	6	5	4	3	2	1

C. ACADEMIC BACKGROUND

Very Similar								Very Different
9	8	7	6	5	4	3	2	1

D. SOCIAL BACKGROUND

Very Similar								Very Different
9	8	7	6	5	4	3	2	1

E. ASPIRATIONS

Very Similar								Very Different
9	8	7	6	5	4	3	2	1

25. If you were to attend a 4-year college or university/community, junior college, how likely is it that you would:

	Very Likely								Very Unlikely
A. BE HAPPY AT A 4-YEAR SCHOOL/2-YEAR SCHOOL	9	8	7	6	5	4	3	2	1
B. BE SATISFIED AT A 4-YEAR/2-YEAR SCHOOL	9	8	7	6	5	4	3	2	1
C. BE SUCCESSFUL AT A 4-YEAR/2-YEAR SCHOOL	9	8	7	6	5	4	3	2	1
D. GRADUATE FROM A 4-YEAR /2-YEAR SCHOOL	9	8	7	6	5	4	3	2	1

APPENDIX B

Knowledge Questions About Oakton/Loyola

Please answer the following questions about Oakton/Loyola

1. Which of the following terms best describes Oakton's/Loyola's admissions procedures? (Check one)

   _____ OPEN

   _____ SELECTIVE

   _____ COMPETITIVE

   _____ HIGHLY COMPETITIVE

2. Think of students who are currently enrolled at Oakton/Loyola. In general, how do you think Oakton/Loyola was ranked or thought of by most students as they applied to colleges?

   _____ OAKTON/LOYOLA WAS THEIR FIRST CHOICE

   _____ OAKTON/LOYOLA WAS THEIR SECOND CHOICE

   _____ OAKTON/LOYOLA WAS THEIR ONLY CHOICE (DIDN'T APPLY ELSEWHERE)

   _____ OAKTON/LOYOLA WAS A SAFETY SCHOOL (APPLIED TO OAKTON/LOYOLA IN CASE NO OTHER, MORE DESIRABLE SCHOOL OFFERED ADMISSIONS)

   _____ OAKTON/LOYOLA WAS A LAST RESORT (APPLIED TO OAKTON/LOYOLA AFTER BEING REJECTED BY OTHER MORE DESIRABLE SCHOOLS)

3. Which of the above statements best describes how you felt about Oakton/Loyola when you were applying to colleges?

4. What college/universities do you think are of comparable quality to Oakton/Loyola?

5. Whether you have declared it or not, what is your major?

6. How many hours are required for a degree in your major?

_____ HOURS

_____ UNDECIDED ABOUT MAJOR

7. In your major area, approximately how many full-time faculty are there in the Department?

8. In your major area, approximately how many courses are offered?

9. In what division/building is the department?

10. Have other members of your family also attended?

_____ YES

_____ NO

IF YES, which members of your family?

11. How favorable or unfavorable were the following persons about Oakton/Loyola? If you did not consult with any one of the following please circle "0" for Did Not Consult.

	Very Favorable				Not At All Favorable	Did Not Consult
HIGH SCHOOL TEACHERS	5	4	3	2	1	0
FRIENDS	5	4	3	2	1	0
HIGH SCHOOL COUNSELORS	5	4	3	2	1	0
EMPLOYERS	5	4	3	2	1	0
PARENTS/FAMILY	5	4	3	2	1	0
CURRENT STUDENTS	5	4	3	2	1	0
FORMER STUDENTS	5	4	3	2	1	0

12. If you are employed, does going to Oakton/Loyola help you retain your current employment?

_____ YES

_____ NO

_____ DOES NOT APPLY

13. What is the average cost, per year, of going to college (including tuition, fees, room and board, and books)? Not necessarily what you pay, but what you think the average cost is?

$ _____

14. Is your cost of going to Oakton/Loyola for a year (including tuition, fees, and books) higher or lower than the average cost of going to college?

_____ MUCH HIGHER THAN AVERAGE

_____ HIGHER THAN AVERAGE

_____ AVERAGE

_____ LOWER THAN AVERAGE

_____ MUCH LOWER THAN AVERAGE

15. Did any of the following lower your costs for going to Oakton/Loyola?

_____ TUITION WAIVER BECAUSE PARENTS WORK AT LOYOLA/OAKTON

_____ LIVE AT HOME AND COMMUTE - NO ROOM AND BOARD

_____ TUITION WAIVER BECAUSE EMPLOYED AT OAKTON/LOYOLA

_____ SCHOLARSHIP PAYS TUITION

16. Are there any other factors, not list above, that lowered the cost of attending Oakton/Loyola?

17. What would you estimate is the percentage of students who apply for financial aid at Oakton who receive it?

18. Do you receive financial aide from Oakton/Loyola and/or other sources (Do not include financial support you receive from PARENTS or family members)

_____ YES

_____ NO

19. Were there any types of financial aid for which you applied that you did not receive?

_____ YES (PLEASE DESCRIBE _____)

_____ NO

20. What kind of social reputations does Oakton/Loyola have? (Check all that apply)

_____ PARTY SCHOOL

_____ SERIOUS ACADEMICS

_____ MOSTLY COMMUTER SCHOOL

_____ FRATERNITY/SORORITY SCHOOL

_____ ATHLETICS

_____ GOOD CLUBS AND ACTIVITIES

_____ OTHER - PLEASE DESCRIBE

21. In what city is your permanent residence?

22. Do you have close friends who also attend Oakton/Loyola? (Friends that you knew <u>before</u> coming here)

_____ YES, How many?_____

_____ NO

23. Where do you live?

_____ WITH PARENTS OR OTHER FAMILY

_____ WITH FRIENDS

_____ ALONE

24. What would you estimate is the average high school class rank of an Oakton/Loyola student?

_____ UPPER 10 PERCENT OF CLASS

_____ UPPER 25 PERCENT OF CLASS

_____ UPPER HALF OF CLASS

_____ LOWER HALF OF CLASS

_____ LOWER QUARTER OF CLASS

25. What would you estimate is the high school GPA of the average Oakton/Loyola student?

_____ (on a 4-point scale, 4.0 = "A")

26. Approximately how many students attend Oakton/Loyola?

27. What is the average class size at Oakton/Loyola?

28. What is the ratio of students to faculty members at Oakton/Loyola?

29. Do you know someone who graduated from Oakton/Loyola who has transferred to another school or gone to graduate or professional school?

_____ YES

_____ NO

If YES, for each person you know, please provide the following information: the year they graduated from Oakton/Loyola, the degree they received (or have in progress), the name of their school and their field of study.

30. Do you know someone who has graduated from Oakton and has begun a successful career?

_____ YES

_____ NO

If YES, for each person you know, please provide the following information: the year they graduated from Oakton, their major, and the field in which they are currently employed.

31. In what extracurricular activities, if any, do you plan to become involved?

32. Before you came to Oakton/Loyola, did you have any contact with Oakton/Loyola faculty? (If so, please explain the nature of the contact.)

33. What do you know or have you heard about the academic work/reputations of faculty at Oakton/Loyola? (e.g., read a book authored by a faculty member, read an article in the paper.)

APPENDIX C

We are interested in your opinions of the kinds of materials that colleges provide prospective students. The following are from four different colleges. We asked the Dean of Students at each college to provide a brief description of the student body and any additional information, e.g., pictures or charts - that might help prospective students learn more about the students who attend the college/university. Please read each description and answer the questions following it. Because we did not want descriptions to be too long or too brief we asked each Dean to respond to a standard set of questions when writing the description.

Ninety percent of our students are recent high school graduates. Of those, nearly all (approximately 92%) attended one of a number of local public and private high schools prior to enrolling here in the Fall. Most students (again, over 90%) attend full-time, taking 12 or more hours per semester. A number of non-academic activities are offered on campus and are available to all students who wish to participate in out of class, school-sponsored activities. About 43% of our students become involved in clubs, athletics, student government, intramural sports, publications, or other extra-curricular activities offered here. In addition to studying and coursework, some students also work. Most students who do work work off-campus (over 90%). However, of those who are employed, about 8% work on-campus for the institution. Some students, though, prefer not to work. Of course, aside from the usual amounts of classwork and studying, students also spend time socializing with friends or family. Most students (78%), upon completing their education between the ages of 20 and 24, will have found work in their chosen or a related field, or will have gone on to do additional academic work at other institutions. A recent survey of alumni confirmed these findings and revealed that most students leave with a sense of accomplishment.

Enrollment
Year of Entrance by
Year of High School Graduation

	Year of College Entrance	
	Fall 1986	Projected 1987
1986-1987	20%	42%
1984-1985	56%	41%
1982-1983	16%	12%
1980-1981	6%	4%
Pre 1980	2%	1%

DIRECTIONS:

Although this information was not provided in the description, assume also that the school these students attend is:

Within your price range and/or offers the financial support you require.

In a location that is convenient for and desirable to you.

Offers the major and degree, or program/courses you seek.

Given this, please answer the following questions. Put yourself in the position of a student who has just decided to go to college and is now trying to decide which college to attend.

HOW LIKELY IS IT:

1. That you would write to this school for further information?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

2. That you would apply to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

3. That you would go to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

4. That you would be successful at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

5. That you would be satisfied at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. That you would like this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. How would you rate this description:

Interesting	9	8	7	6	5	4	3	2	1	Dull
Informative	9	8	7	6	5	4	3	2	1	Not Informative

7. How similar do you think you are to students at this school?

Very Similar	9	8	7	6	5	4	3	2	1	Very Different

8. In what ways are you similar to people at this school? (if you feel you are not similar, simply say "none.")

9. In what ways are you different from people at this school?

Nearly all of our entering freshman class this Fall is made up of students who are recent high school graduates. We have a strong and dynamic student body and we're pleased to have such good representation from our local public and private secondary schools. Like most traditional college students, ours usually take a full academic course load consisting of 12 hours, although some take a little more or a little less, per semester. In addition to their course work, some students also find time for activities outside of the classroom. On campus, students may exercise their talents and abilities through participation in a variety of non-academic activities including clubs, athletics, student government, intramural sports, publications, or other extracurricular activities. Some of our students also have jobs. Most who work are employed off-campus, although a small number of jobs are offered on-campus so students can conveniently combine school and work. Of course, some students prefer not to work, and instead devote most of their time to their school work. When not studying, attending classes, or working students usually socialize and have fun with family or friends. In the end, the education, time and effort really pays off for students. A student leaving here at age 20 -24 has a bright future, whether s/he chooses to go on in academics or begin a career. Most all of our past graduates have been successful and have found employment in their chosen fields or have gone on for additional study at other colleges/universities. All of our students leave with a sense of accomplishment because they have developed a good foundation for the future.

DIRECTIONS:

Although this information was not provided in the description, assume also that the school these students attend is:

Within your price range and/or offers the financial support you require.

In a location that is convenient for and desirable to you.

Offers the major and degree, or program/courses you seek.

Given this, please answer the following questions. Put yourself in the position of a student who has just decided to go to college and is now trying to decide which college to attend.

HOW LIKELY IS IT:

1. That you would write to this school for further information?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

2. That you would apply to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

3. That you would go to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

4. That you would be successful at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

5. That you would be satisfied at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. That you would like this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. How would you rate this description:

Interesting	9	8	7	6	5	4	3	2	1	Dull
Informative	9	8	7	6	5	4	3	2	1	Not Informative

7. How similar do you think you are to students at this school?

Very Similar	9	8	7	6	5	4	3	2	1	Very Different

8. In what ways are you similar to people at this school? (if you feel you are not similar, simply say "none.")

9. In what ways are you different from people at this school?

The majority (94%) of the students in our incoming freshman class are not recent high school graduates. They have been out of school for awhile and are older than the typical age (eighteen to twenty-four years old) for college students. Students return to school for any one of a number of personal or professional reasons. Whatever their reasons for returning to school might have been, the vast majority (three-fourths and over) meet the school's academic requirements for maintaining enrollment (i.e., receive C's or above in all of their classes). Students attend part-time or full-time, and may take from 3 to 15 hours of course work per semester. Some 35-45% (varies with the year and term) also participate in out-of-class activities offered at the college. Most spend non-class time studying, or with family and friends. A good number are employed either full or part-time or as homemakers. Many are parents. Despite the diversity of reasons for going to school or the original intention for enrolling, upon leaving the institution, about equal numbers of students pursue further education, begin or advance their careers and/or have a sense of satisfaction and accomplishment for having reached their educational goals. A recent survey supports this, as 96% of those whose last term was Spring of 1986, report that attending our school was a positive experience.

Projected
1987 Enrollment
Years Since High School

Years Since High School	Percent of Students
1-5	6%
6-10	34%
11-15	38%
16-20	16%
21 & over	6%

DIRECTIONS:

Although this information was not provided in the description, assume also that the school these students attend is:

Within your price range and/or offers the financial support you require.

In a location that is convenient for and desirable to you.

Offers the major and degree, or program/courses you seek.

Given this, please answer the following questions. Put yourself in the position of a student who has just decided to go to college and is now trying to decide which college to attend.

HOW LIKELY IS IT:

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2. That you would apply to this school?

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3. That you would go to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

4. That you would be successful at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

5. That you would be satisfied at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. That you would like this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. How would you rate this description:

Interesting	9	8	7	6	5	4	3	2	1	Dull
Informative	9	8	7	6	5	4	3	2	1	Not Informative

7. How similar do you think you are to students at this school?

Very Similar	9	8	7	6	5	4	3	2	1	Very Different

8. In what ways are you similar to people at this school? (if you feel you are not similar, simply say "none.")

9. In what ways are you different from people at this school?

Mostly our students are not the traditional "just out of high school" students. Our student body consists of seasoned, mature persons who have not been in school for awhile and have just recently decided to return. Although there are as many reasons for coming back to school as there are students, all of our students build successful academic careers here that meet our academic standards. Our students lead interesting, active lives. On campus, some students become involved in any one of a variety of activities that they can chose to suit their individual tastes and personalities. When not in class, or studying students also spend out-of-class time having fun socializing with family and friends. As if all this is not enough, a good deal of our students are also employed. Again, this varies with the student. Some are working full-time, others part-time, some work as homemakers, and still others have the "around-the-clock" job of being parents. After students leave here they go on to be successful in a variety of ways; some actively pursue further education while others begin or advance their careers, while for others the completion of a desired course or number of courses is the definition of success. All of our students leave with a sense of pride and accomplishment, and find that furthering their education was a positive experience.

DIRECTIONS:

Although this information was not provided in the description, assume also that the school these students attend is:

Within your price range and/or offers the financial support you require.

In a location that is convenient for and desirable to you.

Offers the major and degree, or program/courses you seek.

Given this, please answer the following questions. Put yourself in the position of a student who has just decided to go to college and is now trying to decide which college to attend.

HOW LIKELY IS IT:

1. That you would write to this school for further information?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

2. That you would apply to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

3. That you would go to this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

4. That you would be successful at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

5. That you would be satisfied at this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. That you would like this school?

Highly likely 9 8 7 6 5 4 3 2 1 Highly Unlikely

6. How would you rate this description:

Interesting	9	8	7	6	5	4	3	2	1	Dull
Informative	9	8	7	6	5	4	3	2	1	Not Informative

7. How similar do you think you are to students at this school?

Very Similar	9	8	7	6	5	4	3	2	1	Very Different

8. In what ways are you similar to people at this school? (if you feel you are not similar, simply say "none.")

9. In what ways are you different from people at this school?

Think back over the four descriptions of colleges/universities you read to the one description that was most memorable. Write down everything you recall about the material presented in that description in as much detail as possible. Describe it clearly enough so that it will be easy to distinguish the description you have in mind from the other three descriptions. It is important that you do not look back to the description. We are interested in learning what you remember, not in obtaining "right" or "wrong" answers.

Thinking more about the same description you discussed above, write down everything you can remember about the students at the college in the description (if you did not already do so above). Again, please be as detailed as possible.

APPENDIX D

Correlations: Similarity Ratings and Predictions
At Comparison Schools

	(Comparison to 4-year) 2 Year		(Comparison to 2 year) 4 Year
	Older	Younger	Younger
Similarity: Interests			
Happy	.05	.10	.28
Satisfied	.09	.12	.26
Successful	.19	.14	.15
Graduate	.16	.16	.22
Similarity: Ability			
Happy	-.21	.002	.34*
Satisfied	-.04	.03	.33*
Successful	.11	.07	.11
Graduate	-.08	.09	.11
Similarity: Academic Abilities			
Happy	-.23	-.05	.45*
Satisfied	-.06	-.02	.49**
Successful	.09	.06	.17
Graduate	-.05	.04	.12
Similarity: Social Background			
Happy	-.18	.06	.28
Satified	.01	.08	.30*
Successful	.24	.05	.13
Graduate	.10	.01	.17
Similarity: Aspirations			
Happy	-.03	.07	.32*
Satisfied	.13	.07	.29
Successful	.29	.07	.18
Graduation	.20	.13	.41**

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* p<.05 ** p<.01 ***p<.001

Correlations: Similarity Ratings and Prediction at Home Institutions

	(Oakton) 2 year		(Loyola) 4 year
	Older	Younger	Younger
Similarity: Interests			
Happy	.16	.39*	.14
Satisfied	.30	.40*	.22
Successful	.09	.10	.15
Graduate	-.03	.08	.45**
Similarity: Ability			
Happy	.43**	.27	.24
Satisfied	.60**	.32*	.29*
Successful	.13	.08	.28
Graduate	-.01	.35*	.48**
Similarity: Academic Abilities			
Happy	.10	.16	.19
Satisfied	.34*	.20	.21
Successful	-.05	- .003	.32*
Graduate	.02	.33*	.10
Similarity: Social Background			
Happy	.19	- .18	- .09
Satified	.40**	- .11	- .08
Successful	-.06	.01	.20
Graduate	-.06	.01	- .09
Similarity: Aspirations			
Happy	.19	.10	.12
Satisfied	.48**	.15	.16
Successful	.20	.05	.21
Graduation	.20	.32*	.29*

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* p<.05 ** p<.01 ***p<.001

APPROVAL SHEET

The dissertation submitted by Kerry Smith has been read and approved by the following committee:

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Dr. John Edwards
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Dr. Jill Reich
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The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

4/13/88
Date

Linda Heath
Director's Signature