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A COMPARISON OF THE DIFFERENCES BETWEEN THE CHARACTERISTICS
OF ADMITTED FIRST-TIME FRESHMAN STUDENTS WHO ENROLL
AND ADMITTED FIRST-TIME FRESHMAN STUDENTS
WHO DO NOT ENROLL

presented by

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DO NOT ENROLL

By

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ABSTRACT

A COMPARISON OF THE DIFFERENCES BETWEEN THE CHARACTERISTICS OF ADMITTED FIRST-TIME FRESHMAN STUDENTS WHO ENROLL AND ADMITTED FIRST-TIME FRESHMAN STUDENTS WHO DO NOT ENROLL

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Terrie J. Stevens

Problem

The problem was to investigate the characteristics of students who enrolled and students who did not enroll at a particular university for Fall of 1977 to determine if: (1) there were any differences between the characteristics of students who enrolled and those who did not enroll, (2) there were any differences between in-state and out-of-state students who did not enroll, and (3) there were a joint effect of state and enrollment with respect to the characteristics of the students included in the study.

Procedures

The population included nonadult,* nonforeign, nonveteran first-time freshman admitted students for Fall 1977 who had not cancelled their admission by March 1, 1977.

A stratified random sample of five hundred students was chosen from in-state and out-of-state admitted students, using a random number table. The research design consisted of two independent variables: (1) enrollment status with two levels--(a) enrolled and (b) nonenrolled, and (2) residency status with two levels--(a) in-state and (b) out-of-state.

Each of the students in the sample was asked to respond to a questionnaire developed by the researcher. The questionnaire measured student response on eight of the nine dependent variables: (1) academic orientation, (2) career orientation, (3) financial concern, (4) commitment to the institution, (5) family interest in education, (6) large-school orientation, (7) distance concerns (autonomy), and (8) desire to interact in an academic setting with other students and professors (interaction). High school grade-point average, the ninth dependent variable, was obtained from the student applications.

The Statistical Package for the Social Sciences (SPSS) Multivariate Analysis of Variance program was used to test the hypotheses related to student enrollment, residency status, and their joint effect. The .05 level of confidence was selected as the criterion for retaining or not retaining the hypotheses.

Pearson-Product-Moment Correlation and Cronbach's Coefficients of Reliability were selected for item analysis to test variable consistency and correlation.

Major Findings of the Study

The findings of the researcher justified the following conclusions:

1. There are significant differences between first-time admitted freshman students who enroll and those who do not enroll at the particular institution with respect to some of the characteristics identified, specifically (a) career orientation, (b) commitment to the institution, (c) large-school orientation, (d) family interest in education, and (e) high school grade-point average.

Further, students who enroll will (a) be less career oriented, (b) have a stronger commitment to the institution, (c) have a greater large-school orientation, (d) have less family interest in education, and (e) have slightly lower grade-point averages than students who do not enroll.

2. In-state and out-of-state students who do not enroll do not differ significantly from each other with respect to the nine characteristics identified.

3. There is no significant interaction effect of residency x enrollment status with respect to the nine characteristics identified.
4. The nine characteristics identified are not significantly correlated. However, each meets the test for construct reliability.
5. The items included in the questionnaire which constitute the substance of each characteristic are significantly correlated.

* Students less than two years out of high school.

DEDICATION

TO MY MOTHER

The woman I most admire and love,
and to whom I am so grateful.

ACKNOWLEDGMENTS

A loving thank you to my husband, Peter. His constant encouragement, support and love will always be remembered.

The author extends a very special and heartfelt thank you to Dr. Margaret Lorimer who directed this study and provided invaluable support to the endeavor.

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CHAPTER I

THE PROBLEM

Introduction

The university at which this study was conducted admitted 11,925 students for the fall of 1976, only 6,608 or 55.4 percent of whom eventually enrolled for fall term, 1976 (see Table 1.1). This phenomenon is not atypical of that university or of other comparable institutions.

TABLE 1.1

PERCENTAGE OF ADMITTED STUDENTS WHO DID ENROLL

Year	Admits		Number Enrolled		Percentage Enrolled		Percentage Enrolled
	In-State	Out-State	In-State	Out-State	In-State	Out-State	Total Freshmen
1973	9,671	3,308	5,881	854	60.8	25.8	51.9
1974	9,875	3,535	5,986	953	60.6	28.0	51.7
1975	10,193	3,117	6,315	741	62.0	25.8	53.0
1976	9,476	2,449	5,874	734	62.0	30.0	55.4
1977	9,836	2,416	6,225	830	63.3	34.4	57.6

The present research was undertaken in an effort to determine whether such a university could gather information which would assist in increasing the percentage of

admitted students who eventually enroll at an institution. Specifically, the study compares the characteristics of admitted students who did enroll fall term 1977 at the university, with admitted students who did not enroll (who cancelled their admission). The study examines differences between the characteristics of the two groups so that this information could be used in future retention efforts.

Nature of the Problem

Data from the last few years show that the number of applicants to any given institution of higher education is stabilizing. Predictions are that numbers of applicants will begin to decrease by 1980, with the trend continuing into the 1990s. The decline is caused largely by age shifts resulting in a decrease of persons in the 18-24-year-old age group--the traditional college-age population (6, 44). Increasing the percentage of "new students" (minorities, women, adults, part-time) (11) is not likely to offset the decline in this base (17). Table 1.2 is a summary of current national enrollment statistics.

Concern over this phenomenon results because facilities and programs in institutions of higher education have been developed on the assumption that enrollments will not drop. Further, this concern is compounded because of a shift in the nature of funding. In the past, public funding models presumed sufficient support

TABLE 1.2
YEAR-TO-YEAR CHANGES IN TOTAL COLLEGE ENROLLMENTS

Fall	Public	Private	Total
	%	%	%
1966	+ 9.6	+ 4.6	+ 7.9
1967	+11.2	+ 2.7	+ 8.2
1968	+12.8	- 0.7	+ 8.7
1969	+ 8.6	+ 1.2	+ 6.5
1970	+ 9.0	+ 2.1	+ 7.2
1971	+ 5.9	- 0.4	+ 4.3
1972	+ 3.9	0.0	+ 3.0
1973	+ 4.9	+ 1.8	+ 4.2
1974	+ 7.7	+ 2.4	+ 6.5
1975	+11.4	+ 7.1	+10.4
1976	+ 0.0	+ 1.9	+ 0.4
1977	+ 5.3	+ 4.7	+ 3.3

SOURCE: National Center for Educational
Statistics (36, 37).

for existing commitments to debt service and tenured faculty. The major annual question, then, was which additional programs ought to have highest priority and be funded, given scarce resources. Institutions basked in the security of the "ratchet effect," even though budget increases might seem inadequate. Most funding is now based upon projected enrollments. The result is much like that which federal agencies will face with implementation of "zero-based" budgeting. If demand (enrollments, credit hours) drops, so will public funding. Monies go where students go.

Fiscal problems and the state of the economy have caused the public and its legislators to demand greater accountability ("analysis of results and evidence that good or better results cannot be obtained for less expense") (19, p. 75) within public service institutions. A large proportion of public funds goes into education. As societal priorities change from education to welfare and health, educational budgets are being scrutinized in an attempt to apportion less money to education and more into these other service areas. The inclination, on the part of the public and legislature, is to question all funding. Institutions which do not maintain proper enrollment levels, do not fully utilize faculties and facilities, and offer programs duplicated elsewhere (often more cheaply) will have their budget requests

challenged. Money is no longer allocated on the basis of facilities or programs but on the basis of projected enrollments and of service to a locality and to society.

Given (1) the shrinking diameter of the "traditional student pie," (2) the trend toward public funding on the basis of enrollments, and (3) increasing pressures to reallocate appropriations of tax dollars, the educational institutions which thrive will be those that maintain at least current enrollment levels at the expense of competing institutions.

In the past, most institutions received enough applications so that, based upon previous percentages of admitted students who eventually enrolled, they could easily admit as many students as necessary to assure the desired enrollment for incoming freshman students. No longer can that be the case.

It does not appear that the total number of college-bound students will increase or that lowering admissions criteria will produce significantly larger numbers of applicants (34). Thus, the institution which maintains its current enrollment level must (a) significantly increase its share of post-secondary applicants or (b) significantly increase the percentage of applicants who eventually enroll.

The possibility of significantly increasing the institution's share of post-secondary applicants does not

seem likely for two reasons: (1) Students are limiting the number of applications they submit partly because of increased application costs and partly because colleges and universities are encouraging students to narrow their college choices before application; (2) Students are choosing among a larger variety of schools--trade, two-year, and four-year. Therefore, individual colleges and universities are actually attracting a smaller portion of the post-secondary applicants. The second alternative--significantly increasing the applicants who actually enroll appears to be the more viable option. Retention of admitted applicants is the concern of the present study.

The Present Study

Because retention of admitted students has only recently been a concern of most institutions, little is known about how admitted students who enroll are different from those who never enroll. Previous studies related to college choice and studies related to the cancelled student provide some insight. Yet few have directed themselves to the problem of retention. One reason for the lack of adequate research is simply that the nonenrolled student is difficult to locate post facto, thus making comparison impossible. As a consequence, admissions officers find themselves groping for ways to increase retention from the day of admission until the student

actually appears on campus to enroll, with little or no research upon which to base their strategy.

In the present study, the researcher attempts to avoid the handicap of previous research by gathering information from the students prior to enrollment or cancellation.

It is the intent of this study to identify characteristics of nonenrollees which are different from characteristics of enrollees. These characteristics, once identified, can provide valuable information which can be used to predict, a priori, the probability of non-enrollment so that the admissions office and the institution can work to retain more of the admitted students.

For example, if one of the characteristics of students who do not enroll is their concern for the large size of the institution, then the institution might use some of its recruitment money to spell out the advantages of size and to emphasize those benefits which counteract size. Or, if students who reside more than five hundred miles from the campus apply and are admitted are less likely to enroll, then less time and money might be spent on recruitment and retention of those students and more on students within a five-hundred-mile radius. Targeting of admissions office dollars could, therefore, be more accurate. Return on dollars invested in recruiting could be increased. Dollars spent might even be reduced.



The study establishes the characteristics of first-time freshman admitted students. It then examines the characteristics of (1) those who actually enroll and (2) those who do not enroll so that significant differences in the characteristics of the two groups can be identified.

The following characteristics are examined and analyzed using a multivariate technique: (1) academic orientation, (2) career orientation, (3) financial concern, (4) commitment to the institution, (5) family interest in education, (6) concern for institutional size, (7) interaction, (8) autonomy, and (9) high school grade point average.

Research Hypotheses

In order to compare the two groups and to understand the reasons why students who are admitted as first-time freshmen do not enroll, the following hypotheses are tested:

Hypothesis 1:

There are significant differences between admitted first-time freshman students who enroll and those who do not enroll with regard to the nine characteristics identified.

Further, it is hypothesized that students who eventually enroll will:

- a. have stronger academic orientation
- b. have a stronger career orientation
- c. have less financial concern
- d. have a stronger commitment to the institution

- e. have stronger family interest in education
 - f. have a greater large-school orientation
 - g. be more willing to leave home (autonomy)
 - h. be more interested in interacting in an academic setting
- than those students who do not enroll.

Hypothesis 2:

There are significant differences between out-of-state students who do not enroll and in-state students who do not enroll with regard to each of the nine characteristics identified.

Further, it is hypothesized that out-of-state students who do not enroll will have greater financial concerns than in-state students who do not enroll.

Hypothesis 3:

There is significant interaction between student residency status and student enrollment status with regard to each of the nine characteristics identified.

Hypothesis 4:

There is significant correlation between certain of the nine characteristics.

Hypothesis 5:

There is significant correlation between items included in the questionnaire which constitutes the substance of each characteristic.

Summary

A declining pool of potential college freshmen and increasing costs of recruiting require that the admission office dollar be spent in the most efficient, effective way possible. This is essential if institutions of higher education are to sustain the enrollments that



they believe they need to support their programs and serve society's needs for educated manpower.

Little is known about the reasons students do not enroll. Therefore, admissions offices recruit all students as if they will eventually enroll. This is costly and does not provide the best service to students, the institution, or the state.

The present study compares the characteristics of admitted students who enroll with the characteristics of admitted students who do not enroll. The findings will be useful in determining what to promote and communicate to future prospective freshmen. It is expected that the findings will increase the ability of the admissions office to predict enrollment and predict nonenrollment and that the methodology used and the concern expressed in this study will be applicable to the vast majority of institutions of higher education.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The following chapter contains a survey of research conducted in areas related to the concern of the present study. Four areas are examined:

1. Who goes to college and why
2. How do they decide and what factors are important in that decision
3. Why students do not enroll at a particular institution
4. Why students "drop out" (do not persist) once enrolled

Research on college going and college choice has increased in quantity and quality over the past ten to fifteen years largely under the auspices of the American College Testing Program, The College Entrance Examination Board, and The American Council on Education. A review of the research on college attendance and college choice provided valuable insights into the complexity of the



college decision process and provided the base upon which the research instrument for the present study was developed and hypotheses were formed.

Previous research on the "nonenrollee" (cancelled) student is sparse. However, that which has been executed contributed to the formation of hypotheses for the present study.

Research in the fourth area, "why students drop out," while not a part of this study, was reviewed on the assumption that there is a close relationship between persistence and proper college choice and because of the possible transferability to the nonenrollee of some of the prediction models developed and conclusions reached.

Who Goes to College and Why?

Who Goes to College?

In Fall 1974, 60.4 percent of the number of high school graduates in Spring 1974 enrolled for the first time in degree-granting collegiate level institutions (14).

Students who attend are more likely to have higher academic ability and come from families with higher socioeconomic status than students who do not attend college. They are likely to come from smaller families, bigger cities, and larger high schools when compared with students who choose not to go to college. Students who attend are more likely to be male than female (14, 20).



Further, students who decide to attend college have most likely had greater exposure to intellectually oriented activities in the home and greater parental advocacy of college than those who do not attend (10).

Kandel and Lesser (1970) concluded that college attendance was not as much influenced by SES (Social Economic Status) as by the values and attitudes of immediate associations within the school (33). Trent and Medsker (1967) concluded that peer influence in high school is an even more important source of variation in college plans than parents' educational attainments (56).

Trent and Medsker (1967) attributed nonattendance to lack of motivation and academic background combined with lack of money (25). Baird (1967) found that if low income youth did attend college, they were more likely to attend low tuition schools and schools close to home. They were more likely to expect to work, live at home, emphasize vocational training, or choose majors in education or social science rather than in the hard sciences or pre-professional majors. Low income college attenders were less likely to live in fraternities and sororities, participate in student government, and aspire to administration positions or graduate degrees (8).

Many studies have been conducted regarding proximity as it affects college going. The most often quoted is perhaps that of Thresher (1965) in which he



states that a desire for propinquity is probably the single most important influence on college attendance (53). Anderson, Bowman, Tinto (1971), and Tinto (1973) contradict Thresher, Astin, et al. (5, 54). Tinto who did a comparative study of students in North Carolina and Illinois determined from the outcome of his research that college attendance was not related to proximity of an institution but that:

1. Persons in smaller communities in Illinois did not attend college in less proportion than persons from larger communities without a college.
2. Cultural remoteness from college has as strong a correlation as geographic remoteness.

Tinto found that where differences in attendance occurred, they were highly dependent upon both student characteristics and the type of local institution. Only the attendance of lower ability students increased with a local community college, regardless of background (54). Fenske and Scott (1972) concluded that the higher the ability, the more likely the student is to migrate from home (21).

This research supports the hypotheses that students are less likely to enroll at the institution at which the present study was conducted if they have below

average academic ability, if their parents have not attended college, if they are from low income families, or if attendance means that they would be some distance from home.

Conclusions regarding family size, major choice, type of high school, and urban versus rural environment and college attendance are not tested in the present study but could be, using the same data base for future research.

Why Do They Attend?

Perhaps the most comprehensive survey of "Student Characteristics and Attitudes" has been conducted by Alexander Astin since 1966 and under the auspices of the American Council on Education. His 1976 data were based on responses from 215,890 full-time freshmen entering 393 representative institutions for the first time in 1976 (6).

These students list the following as "reasons noted as very important in deciding to go to college":

- | | |
|------------------------------------|-------|
| 1. Learn more about things | 72.9% |
| 2. Able to get a better job | 71% |
| 3. Gain general education | 64% |
| 4. Able to make more money | 53.8% |
| 5. Meet new and interesting people | 53.3% |



Dole (1970) reported on a study of students at the University of Hawaii. His purpose was three-fold: (1) to examine the most important reasons for going to college, (2) to see if any changes occur between freshman and senior year, and (3) to test the extent of the relationship between responses of the freshman and senior year for the same group of students. His findings indicated that the most popular reasons freshmen gave for going to college were:

1. The degree is necessary for the kind of work I do.
2. I hope to prepare to be a success in life.
3. I hope to obtain satisfaction in my field.
4. The degree means a great deal.
5. The degree will give me the aptitude and opportunity for advancement.

The only significant change in response between freshman and senior year was that more seniors indicated that they attended college because their friends were going to attend (18).

Knowledge of the characteristics of college-bound students and the reasons they give for going to college, as revealed in the literature, is essential to the present analysis of final college choice as each provides insight into how students narrow down their college-going options.

The next section "How Do They Decide?" further examines the issue. The literature surveyed supports the researcher's conviction that any research related to college choice must take into account the complex nature of the process.

How Do They Decide and What Factors Are Important in that Decision?

How Do They Decide?

The college-going decision is a complex multi-variate process. The final choice is an outcome of a complex interaction of factors (20). Mundel (1974) concluded that the final decision was affected by many factors: (1) ability to achieve; (2) motivation, tastes, and aspirations; (3) costs of attending various colleges; (4) college characteristics; (5) family characteristics; and (6) the influence of other alternatives. Mundel reminds researchers that sometimes choices are thwarted because the student does not meet the admission criteria of the first choice school and that different colleges may have different attributes appealing to different students (i.e., financial aid awards). Mundel's study confirmed that it is the attributes of a college, not its type and control, which are of interest to the prospective student. (This is contrary to Astin, 1965 [7].) He also found that as income increases, previous educational influence decreases (39).

Many researchers have concluded that students apply a certain decision logic to college choice. Kother (1976) describes the process in the following manner:

1. The student rates each college characteristic according to his or her own criteria,
2. Applies decision logic,
3. Probably has some post-decision anxiety (cognitive dissonance) because he has gained some advantages and given up others.

The student may (1) choose the college that rates highest on each characteristic (dominance model), (2) choose the college that has at least each characteristic considered important (conjuncture model), or (3) choose the college with the highest overall score (compensatory model) (34).

Reid and Holley (1972) applied a "Repertory Grid Technique to the Study of College Choice." Their hypothesis was that "although environmental factors may exert powerful influences over application decisions to apply to particular universities, these influences only become effective through interaction with the image of the university which the applicant comes to possess" (p. 52). To test this hypothesis, they applied a technique (Repertory Grid) developed by Kelly (1955). Kelly's technique is based upon the theory that "each individual has access

to a limited number of dimensions or constructs along which he evaluates a set of cognate phenomena in his universe" (i.e., people, institutions, particular classes of ideas or events). These constructs are bipolar (intelligent--unintelligent, comfortable--uncomfortable). Kelly suggests triad groups for eliciting constructs from individuals (father, teacher, friend--intelligent, intelligent, unintelligent). Given these constructs, it is possible to construct matrices or grids.

Because a choice is based upon discrimination of some kind, Reid and Holley applied the technique to making a college choice. Their analysis suggested that:

1. Some aspects of the image which is held of a particular university help to decide whether or not it is chosen by applicants.
2. However, the university "image" to which the applicant responds is presumably something "given" rather than something which, since it is constructed from his own experience, is highly dependent upon his own personal history and circumstances.
3. Images are not readily modifiable through exposure to rational information.

Their research points out the fact that merely increasing the quantity or the quality of information

available to candidates is not enough. We must have a better understanding of (1) the perceivers of the information, of (2) these perceptions over time, and (3) the extent to which selection of a university is self-selection based upon responses to popularly accepted stereotypes (46).

The fact that students hold images of institutions real or perceived and that these images determine college choice has been demonstrated continually throughout the research (9, 35, 42, 55). Feldman and Newcomb sum up the idea in the following manner: "They select colleges by means of vague notions which they can seldom document meaningfully" (20, p. 112).

As mentioned in Chapter I, it is a basic conviction of this researcher that an understanding of the characteristics of applicants and admitted students is essential if colleges and universities are to (1) enroll those students who will benefit from programs offered at their institutions; (2) increase the realization in students that they indeed can benefit from the offerings at a particular institution and thus increase the retention rate (the enrollment rate) of admitted students; and (3) encourage students who are not likely to benefit to apply and enroll elsewhere, thus reducing the cancellation and drop-out rates.

Knowledge of the decision-making process and factors which influence that decision (as reviewed in the following section) contribute greatly to that understanding.

What Factors Are Involved in
the Final Decision?

Richards and Holland's (1965) study in this area is the most quoted in the literature. Their study involved an examination of the student profile section of the American College Test. Twenty-seven college choice factors were factor-analyzed into four components:

1. Intellectual Emphasis--good faculty, high scholastic standards, special curriculum, desirable intellectual atmosphere, national reputation
2. Practicality--desirable location, close to home, low cost
3. Advice of others--parents, alumni, teachers, counselors
4. Social Emphasis--desirable social climate, good athletic program, fraternities and sororities, co-educational (47)

Ralley (1972) also identified four factors that appear to affect students' selection:



1. Internal factors to the institution (academic reputation and prestige)
2. Factors external to the institution (location, propinquity)
3. Human influences external to the institution (encouragement or discouragement from friends or counselors)
4. Personal factors (finances) (12)

The conclusions of Richards and Holland and Ralley are supported by institutional studies conducted by Anderson (1973) and Strodahl (1970) (5, 52).

Characteristics considered most important by students and parents, using responses to the questionnaire accompanying the PSAT (Preliminary Scholastic Aptitude Test), as analyzed by Ivens (1975) were:

1. Courses to prepare for a job or professional school
2. Professors interested in students
3. Opportunities to meet new people
4. Variety of activities
5. Availability of financial aid (31)

Factors affecting college choice as reported in the ACT Profile 1976 (13) as first or second in importance were:

- | | |
|------------------------|-----|
| 1. Field of study | 63% |
| 2. Tuition and cost | 43% |
| 3. Location and size | 41% |
| 4. Type of institution | 31% |

Bowers and Pugh (1972) found that students and parents rated the academic reputation of a school and of the academic department most important in making their college choice. Financial, geographic, and academic factors were more important to parents than to students. Social, cultural, and informal advice were more important to students than to parents (9).

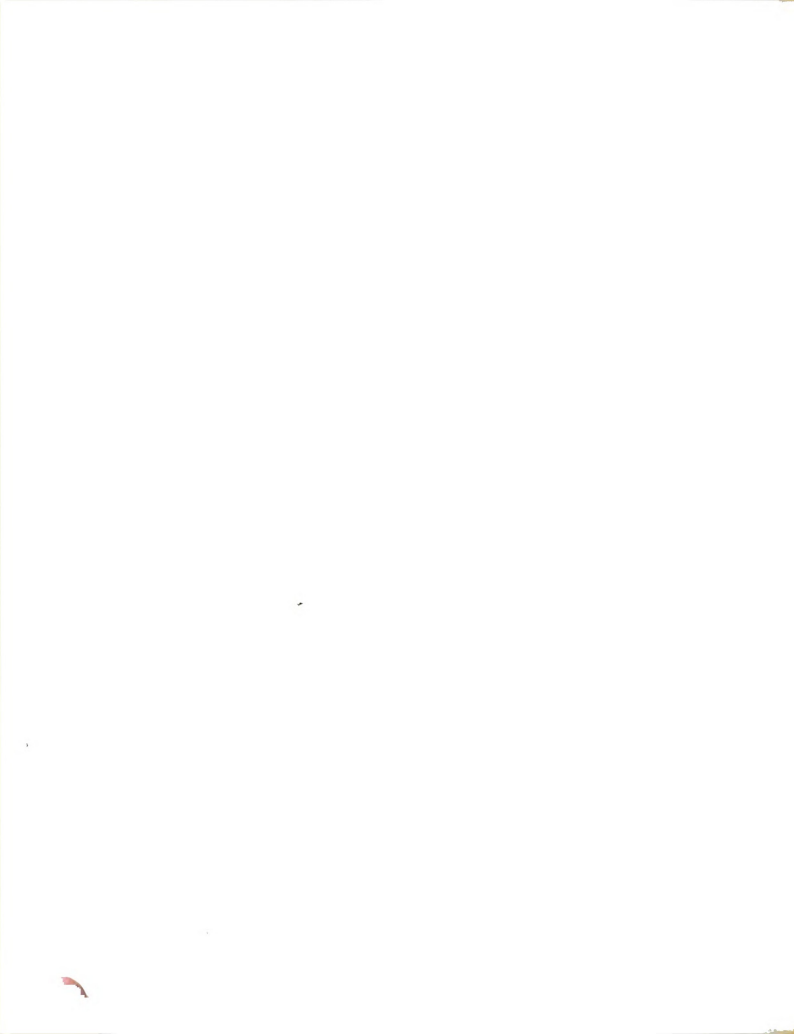
The remainder of the studies related to college choice are institutional studies--each examining why students choose that particular institution.

Students choose Ball State in Indiana for (1) the program of study, (2) location, (3) financial considerations (1).

Financial aid information is considered the most helpful and the most important influence on student's choice to attend Kansas State in Fort Hays, Kansas. Students most frequently choose Fort Hays for its medium size and low tuition (51).

The dominant patronage motives at the University of Tennessee at Martin were (1) location and size (48.5%) and (2) reputation for high quality education (25%) (24).





The ACT Class Profile for the institution used in this research (1976) reported 66 percent of the enrolled freshmen who reported the ACT scores (4183/6900) chose the institution at which the study was conducted because of its offering in their field of study (3).

These studies provide three obvious benefits to the researchers and their respective institutions: (1) The institutions become more aware of the image that students have of their institutions; (2) The institutions become more cognizant of the strength of that image; and (3) The studies provide information about the types of students attracted to the institutions. An indirect result of the research is to provide information to the institutions regarding perceived images which are not accurate, which should be enhanced or which should be modified, and which cause students not to attend, as discussed in the next section.

Factors Which Influence the Decision Not to Attend

Closely related to college choice is the study of cancellation. Little research has been conducted in this area for a number of reasons:

1. Until recently, colleges and universities have not been concerned about the nonenrolled student because they had more qualified applicants than they could accommodate.

2. Responses from cancelled students regarding their reasons for cancellation are not very enlightening, possibly because of their lack of commitment to the institution and because of "socially acceptable" responses to inquiries.
3. It is difficult to reach many students after cancellation--they do not respond.

A few studies have been conducted, however, and the results are reported.

The most common reason given for cancellation was that "the institution was not the student's first choice" (3, 12, 27, 32). (The converse is not true: Although an indication that a college was the first choice was the single best predictor of applications, it did not predict enrollment significantly better than any other choice designation according to Sheffield [1975]) (48).

The desire for propinquity was the second most common reason given for cancellation (2, 27, 30, 32, 41, 58). Other reasons frequently mentioned were financial consideration, size, and better programs elsewhere.

The question raised after reviewing the research on the cancelled student is whether some of the students who cancelled might have been well served by the institution they decided not to attend. The conviction of the researcher is that many of the students could have been well served if they had possessed a correct image of the



institution and if they had been aware of the ability of the institution to meet their needs. Many of the studies on persistence and withdrawal have addressed themselves to this concern. Therefore, some of the research in this area was examined.

Factors Relating to Persistence and Attrition

The close relationship of proper initial choice and persistence is emphasized in the reports of Feldman and Newcomb (1969, p. 22) and Pervin (1963), respectively: "There is no doubt that the expectations the student brings with him to college, and the degree to which they are or are not fulfilled, play an important role in determining his reaction to, satisfaction with and experience in college" (20). "Expectations an individual brings to a situation significantly influence how he experiences and copes with that situation" (45, p. 41).

Huber (1971) did a survey of the research on dropouts and concluded that academic criteria correlated with retention only with marginal admits. Huber relates the college experience to Maslow's "Hierarchy of Needs." Man, he emphasizes, is a wanting animal. His behavior is largely determined by unsatisfied needs that he wants to satisfy. The typical college or university neither can, nor should, be expected to provide opportunities to fulfill all of these needs. Just as obviously, not all

persons upon completion of high school are at the same rung on the "Hierarchy of Needs." Huber's conclusion is that if one were to examine each student as an individual and determine what his current needs are at the time of entry, one could predict with almost perfect accuracy his likelihood of self-fulfillment and thus retention by the school.

His caveat is that this assumes a true picture of the school itself and what it has to offer its clientele. He sees the gap widening between the original needs of the individuals who were to be served as well as geographic, economic, and social needs of the community that spawned the school and the increasing internal "ego needs" of the institution. As a consequence, attrition increases as increased numbers find that their respective needs do not match the institution's offerings which have now become dictated by the institution's needs (29).

Starr, Betz, and Menne (1972) related the same hypothesis to the "Theory of Work Adjustment" which states that "an individual will seek to achieve and maintain correspondence with his environment" (Davis, Lofquist, and Weiss, 1968). If an individual is to remain within the college environment, he must be fulfilling the requirements of the environment and the college environment must be meeting his needs. This "Correspondence



Concept" is similar to the congruence model proposed by Stern [1970], Pervin [1967], Pervin and Rubin [1967], Rand [1968].

In a study conducted at Iowa State University in 1968-69, persisters scored significantly higher in satisfaction measures for compensation, recognition, quality of education, and total satisfaction. In each case, non-dropouts scored higher than nonacademic dropouts (50).

Cope concluded that:

Self selection is a key factor of success in college. The values of an individual are one of the primary determinants of persistence. This relationship points out the need for institutions to clarify these values in the minds of entering students and to examine the admission procedures for possible adjustment. (16, p. 33)

He further concludes that a substantial number of students transfer from the institution of first matriculation simply because of a poor assessment of the social and intellectual climate (15, 16).

Relating this to the work of Pace and Stern on environmental press (1965), Fenstemacker (1973) concludes that "when there is a discrepancy between personal needs and the ability of the environment to satisfy those needs, a student is more likely to drop out than a student who experiences a congruent relationship between his needs and environmental presses" (22, p. 186).

A 76-item bibliographic inventory was constructed by Aiken at the University of North Carolina at Greensboro



and administered to 1,006 incoming freshmen in 1962. His assumption was that academic success and early attrition could be predicted by means of the inventory. There appeared to be a significant relationship between voluntary withdrawal and lack of motivation for academic achievement (4).

In an effort to study the relationship between personality characteristics and attrition, Zaccaria and Creaser (1971) administered a personality inventory to students who participated in freshman orientation prior to their freshman year at the University of Illinois, Chicago Circle. They found that withdrawers were more likely to (1) be less conforming to rules, regulations, and expectations of others, and (2) have "unsatisfactory" academic records when compared to persisters.

Male nonpersisters were likely to have greater heterosexual interests when compared to male persisters. They concluded that both intellectual and personal characteristics must be considered when studying attrition (59).

Panos and Astin arrived at the same conclusion after studying dropouts between 1961-1965. They found that students were most likely not to complete four years if:

1. They had relatively low grades in high school.

2. They enjoyed reflective, artistic, less structured experiences.

Women withdrawers had greater need for independence than women persisters (43).

Contrary to Panos and Astin (1968) and Astin (1964), Zaccaria and Creaser found no significant differences between withdrawers and persisters on level of aspiration, objectives in college, family income, SES or parents' educational aspirations for their children (7, 43, 59).

Smith (1976) reported his study of "Personality Differences between Persisters and Withdrawers at a Small Woman's College." Students who withdrew were:

1. Better able to deal with ambiguity, more autonomous, but not more impulsive
2. Less socially inclined and outgoing
3. Greater intellectually oriented, less practically oriented, and more concerned with abstract ideas and interests than persisters (49).

Hackman and Dysinger (1970) found significant correlation between commitment at entrance and persistence.

On the basis of their studies, it is the conviction of the researchers mentioned that withdrawal/persistence

can be predicted by an examination of nonacademic, along with academic, characteristics of students prior to matriculation (26).

This researcher attempts to apply this conviction to the prediction of show, no-show by examination of non-academic, along with academic characteristics, of admitted students prior to enrollment.

Summary

A review of the literature related to College Choice, Cancellation, and Persistence supports the reasons given for the present study: If an institution and interested students have a mutual understanding of the image of the institution and the needs of the student, both will be better served. The institution will likely enroll more students who can benefit from attendance at that institution and those students who enroll will more likely persist to graduation.

CHAPTER III

METHODOLOGY

Introduction

The present study was undertaken in an effort to gain better understanding of the types of admitted students who are likely not to enroll at a particular institution.

Better understanding of the nonenrolled students' characteristics will enable the institution to better match the needs of those students with the resources of the institution. This will allow the institution to (1) direct its efforts to those students who are likely to attend and (2), where poor communication is a factor, improve the information provided to prospective students. This knowledge will also allow the student to make a more informed decision regarding college choice.

The study is different from previous studies on cancelled students in three ways:

1. The data were collected before the students cancelled their admission, thus reducing the problem of nonresponse or merely "socially acceptable" responses from the nonenrolled student.

2. The students made multiple responses to a questionnaire so that multiple responses could be examined.
3. The study is a comparative study comparing the characteristics of students who enroll and those who do not enroll so that significant differences in the characteristics of the two groups might be examined.

General Design

Sample

A stratified random sample of five hundred students was selected from out-of-state and in-state first-time freshman admitted students to the chosen university, using a random number table. These students were admitted for fall term of 1977 and at the time of the selection, March 1, 1977, had not cancelled their admission for fall term.*

Approximately 79 percent of the students admitted each fall at the university are in-state residents. Thus, 395 students, or 79 percent of the sample, were selected from in-state admitted students. One hundred and five students, or 21 percent of the sample, were selected from the out-of-state admitted students.

* March 1 was chosen as the date for the selection of the sample because the majority of students admitted to the university are admitted before this date and very few cancellations occur before this date.

Adults,* veterans, and foreign students were excluded from the sample. These students were excluded because of the small numbers of students in these categories, because of their unique characteristics and because of special admissions criteria applied to these applicants.

Independent Variables

The independent variables are (1) Student enrollment status which has two levels: (a) enrolled and (b) nonenrolled and (2) Student residency which has two levels: (a) in-state and (b) out-state. The variables are represented in the following cell-configuration (Figure 3.1):

		<u>Residency Status</u>	
		In-State	Out-State
<u>Enrollment Status</u>	Enrolled		
	Nonenrolled		

Fig. 3.1. Cell configuration for the two independent variables

Nature of the Data

Each of the students in the sample was asked to respond to a questionnaire mailed March 7, 1977 (see Appendix A). A second mailing was sent to students who

* Students out of high school two years or more.

had not responded by April 15, 1977, and who still had not cancelled their admission (see Appendix B).

The questionnaire measured student response on eight of nine dependent variables:

1. Academic orientation
2. Career orientation
3. Financial concern
4. Commitment to the chosen university
5. Family interest in education
6. Large-school orientation
7. Autonomy
8. Interaction

High school grade-point average, the ninth dependent variable, was obtained from student applications. The questionnaire was developed in the following manner:

1. The variables were chosen after reviewing the literature regarding students' attitudes toward college choice. Astin, "The American Freshman: National Norms for Fall 1976"; Pace, "CUES"; The American Council on Education, "Student Information Form"; and Dole, "Most Popular Reasons for Going to College" were particularly beneficial in developing the questions (6, 18, 42).

2. Members of the admissions staff at the chosen university were asked to review the questions and make suggestions for content refinements, deletions, or additions (28, 38).
3. Two faculty members, one in institutional research and one in educational psychology, were asked to review the questionnaire and made essential suggestions for its refinement from a measurement viewpoint.
4. The questionnaire was pre-tested by having forty-five prospective freshmen respond to it under the supervision of the researcher. The students were directed to ask questions if they did not understand how to respond to a question being asked.
5. Reliability analysis was performed to examine the internal consistency of the items composing each of the eight dependent variables. Those items which did not have high correlation with their respective variables were discarded prior to the statistical analysis related to the research hypotheses (40, 57).

Research Hypotheses

Studies reveal that there are many reasons why students choose a particular school. Among the most often mentioned are academic reputation, career preparation

possibilities, financial considerations, image of the institution, family influence, distance from home, and social considerations.

In order to further examine reasons why students eventually decide not to choose a particular school (why they do not enroll after being admitted), the following hypotheses were tested.

Hypothesis 1:

There are significant differences between the enrolled and nonenrolled admitted first-time freshman students with regard to the nine dependent variables.

Hypothesis 2:

There are significant differences between out-of-state students who do not enroll and in-state students who do not enroll with regard to the nine dependent variables.

Hypothesis 3:

There is interaction between student residency and student enrollment status with regard to the nine dependent variables.*

Hypothesis 4:

There is significant correlation between the nine dependent variables.

* The first hypothesis tests the effect of enrollment status on the nine dependent variables. The second tests the effect of residency status on the nine dependent variables. The third tests the "interaction effect" or combined effect of enrollment status x residency status on the nine dependent variables.

Hypothesis 5:

There is significant correlation between items within each variable.

Based upon these research hypotheses, the following null hypotheses were formulated for the purpose of statistical analysis.

H₀1:

There are no significant differences between admitted first-time freshman students who enroll and those who do not enroll with regard to any of the nine dependent variables.

Directional Hypotheses: Students who enroll will:

- (a) have a stronger academic orientation
- (b) have a stronger career orientation
- (c) have less financial concern
- (d) have stronger commitment to the chosen university
- (e) have stronger family interest in education
- (f) have a greater large-school orientation
- (g) be more willing to leave home (autonomy)
- (h) be more interested in interacting in an academic setting

than those students who do not enroll.

H₀2:

There are no significant differences between out-of-state first-time freshman admitted students who do not enroll and in-state first-time freshman admitted students who do not enroll with regard to any of the nine dependent variables.

Directional Hypothesis: Out-of-state students who do not enroll will have greater financial concerns than in-state students who do not enroll.

H₀³:

There is no interaction between student residency and student enrollment status with regard to any of the nine dependent variables.

H₀⁴:

There is no significant correlation between any of the nine dependent variables.

H₀⁵:

There is no significant correlation between items within each variable.

Analysis

The sample was divided into four groups: (1) out-state enrolled, (2) out-state nonenrolled, (3) in-state enrolled, (4) in-state nonenrolled (see Figure 3.1).

To test the first three hypotheses, multivariate analysis of variance was used. This technique was chosen because of the ability of the tests used to attend to the data as a whole rather than to each set of comparisons of means separately. Analysis of each of the measures separately results in redundancy to the extent that the measures are nonindependent. Statistical error rates may be multiplied manifold, and the replicability of the study is reduced. The multivariate model retains the multiple scores as a set of interrelated traits (23, 57).

To test H₀⁴ and H₀⁵, Reliability Analysis and Pearson-Product-Moment correlation techniques were used.

They were chosen so that the correlation between items and variables, and the internal consistency of items composing each of the nine variables, could be examined.

In general, the concept of reliability refers to how accurate, on the average, the estimate of the true score is in a population of objects to be measured. The computer program used, SPSS Subprogram Reliability, is designed to be used in those situations where the goal is to assess how reliable a sum or weighted sum across variables is as an estimate of a case's true score. If all of the variation in the observed scores is due to errors in measurement, the reliability coefficient will be zero. If there is no error in measurement, the reliability coefficient will be one. Many reliability coefficients can be computed. "Cronbach's Alpha" was used for the present study (40, 57).

Pearson-Product-Moment Correlation is used to "measure the strength of relationship between two interval-level variables." The strength of the relationship indicates both the goodness of fit of a linear regression line to the data and, when "r" (the Pearson correlation coefficient) is squared, the proportion of variance in one variable explained by the other (40, 57).

Summary

This research was designed to compare the characteristics of first-time admitted students who enroll at

the chosen institution and those who do not enroll in an effort to gain a better understanding of the characteristics of students who do not enroll after they have been admitted (the cancelled student).

The data were collected on both groups prior to the cancellation of admission of any of the students in the sample. The data were analyzed after the beginning of fall term 1977 so that nonenrolled (cancelled) students could be identified.

Multivariate analysis of variance was used to analyze the significant differences between the two groups. Pearson-Product-Moment Correlation and Reliability techniques were used for item analysis and variable consistency and correlation.

CHAPTER IV

ANALYSIS OF THE RESULTS

The analysis of the data and results of the research finding are reported in this chapter.

Data Collection and Analysis Procedures

Three hundred and seventy-six, or 75 percent of the students who were sent the questionnaire, responded. Three hundred and seventy-one, or 74.2 percent of the five hundred questionnaires, are represented in the analysis. Five questionnaires were discarded because the directions were not followed or because they were not completely filled out. With respect to the completed questionnaires: 302, or 75 percent of the in-state students, returned the questionnaire; 69, or 65.7 percent of the out-state students, returned the questionnaire; 208, or 65.6 percent of the in-state students who returned the questionnaire, eventually enrolled at the institution; 33, or 47.8 percent of the out-state respondents, eventually enrolled (see Figure 4.1).

		<u>Residency Status</u>		
		In-State	Out-State	
<u>Enrollment Status</u>	<u>Enrolled</u>	208	33	241
	<u>Nonenrolled</u>	94	36	130
		302	69	371

Fig. 4.1. Summary of responses to the questionnaire

The reliability of the questionnaire was tested through application of Pearson-Product-Moment Correlation and computation of Cronbach's Reliability coefficients (38, 57). Those items which did not correlate with the respective variable and with each other were discarded. Thirty-one of sixty-five items were retained (see Table 4.1).

Each variable was defined by the mean ratings for the items which composed it. A Likert scale was used to solicit responses, a response of (1) indicating strong agreement with the statement, (5) indicating strong disagreement (see Table 4.2). Transformation from the mark-sense sheets to computer punch cards converted the (1) to (5) scale to (0) to (4). In addition, items stated in negative terms were re-coded. (A response of strongly agree [0] re-coded to strongly disagree [4].)

TABLE 4.1

THE FINAL COMPOSITION OF THE NINE DEPENDENT VARIABLES

Variable	Item
Academic Orientation	2. A college degree means a great deal to me. 3. I think I can succeed in college. 6. College will allow me to explore exciting new academic ideas. 7. The academic reputation of a college is very important to me. 9. I want to go to college to improve my mind. 10. I look forward to being able to take challenging courses.
Career Orientation	11. I am fairly certain about my career plans. 12. A college degree is necessary for the kind of work I want to do. 13. I have chosen my present major because my abilities are closely related to this area.
Financial Concern	17. I plan to work while I am in college. 18. My parents will finance at least 50 percent of my college education. 19. Unless I receive financial aid, I will not be able to attend a four-year college next year. 20. I plan to finance my own college education. 22. I will probably have to take out an educational loan to finance my college education. 23. I will probably have no problem financing my college education. 24. My final decision regarding where I will attend will probably rest on the amount of financial aid I can receive.
Commitment to the Institution	25. I applied only to Michigan State because I am certain that I want to go there.

TABLE 4.1.--Continued

Variable	Item
Commitment to the Institution (continued)	<p>26. I applied to two or more colleges because I was not sure about which school I wanted to attend.</p> <p>27. I applied to Michigan State because it was my first choice.</p> <p>28. I applied to Michigan State because it is one of the few schools which offers the major I am interested in.</p>
Family Interest in Education	<p>34. My parents have influenced my decision about a college choice.</p> <p>35. My other relatives have influenced my choice of college.</p> <p>37. Part of the reason I want to go to college is because my parents want me to.</p>
Size	<p>43. I prefer a small school setting in which to pursue a college degree.</p> <p>47. I would probably make more friends at a small school.</p> <p>48. I would prefer a small private school if I could afford it.</p>
Interaction	<p>44. I hope to have the opportunity to get to know the professors who teach my classes.</p> <p>45. I would prefer to be in classes with less than thirty students.</p> <p>46. I would prefer to be in classes with more than one hundred students.</p>
Autonomy	<p>52. I would prefer to go to a college away from home.</p> <p>55. I want to go away to college because it will be good for me to get away from home.</p> <p>56. I would prefer going away to college so that I could be on my own.</p>
GPA	Grade Point Average



TABLE 4.2

CONTINUUM FOR THE EIGHT DEPENDENT VARIABLES REPRESENTED
BY THE STUDENT QUESTIONNAIRE

Variable	Response	
	+	-
Academic	Strong academic orientation	Weak academic orientation
Career	Strong career orientation	Weak career orientation
Financial	Strong financial concern	Weak financial concern
Institution	Strong commitment to the institution	Weak commitment to the institution
Family	Strong family interest in education	Weak family interest in education
Size	Large-school orientation	Small-school orientation
Interaction	Weak interest in interacting in an academic setting	Strong interest in interacting in an academic setting
Autonomy	Strong willingness to leave home	Weak willingness to leave home

Analysis of the Data

Hypothesis 1

This hypothesis was formulated to obtain evidence about the first research hypothesis (Chapter I) which stated that there would be significant differences between admitted first-time freshman students who enroll and those who do not enroll with respect to the nine characteristics identified. Further, it was hypothesized that students who enroll would:

- (a) have a stronger academic orientation
- (b) have a stronger career orientation
- (c) have less financial concern
- (d) have a stronger commitment to the institution
- (e) have stronger family interest in education
- (f) have a greater large-school orientation
- (g) be more willing to leave home (autonomy)
- (h) be more interested in interacting in an academic setting

than students who did not enroll.

The corresponding null hypothesis tested using the Multivariate Analysis of Variance Technique (SPSS Subprogram MANOVA) was:

H₀¹:

There are no significant differences between admitted first-time freshman students who enroll and those who do not enroll with regard to any of the nine dependent variables.

This hypothesis was not retained at the .05 level. Significant difference was found between admitted first-time freshman students who enroll and those who do

not enroll with respect to the nine dependent variables

($F_{1,367} = 14.50901$, $P \leq .00001$). (See Table 4.3.)

Univariate Analysis of Variance indicated significant difference between those who enrolled and those who did not enroll with respect to five of the dependent variables at the .05 level (see Table 4.3):

1. Career Orientation: The difference between the career orientation of the two groups was found to be significant at the .05 level ($F_{1,367} = 5.45456$, $P \leq .02005$).
2. Size: The difference between the two groups with respect to large-school orientation was found to be significant at the .05 level ($F_{1,367} = 8.71588$, $P \leq .00336$).
3. Commitment to the Institution: The difference between the two groups with respect to their commitment to the institution was found to be significant at the .05 level ($F_{1,367} = 102.08955$, $P \leq .00001$).
4. Family Interest in Education: The difference between the two groups with respect to family interest in higher education was found to be significant at the .05 level ($F_{1,367} = 4.87322$, $P \leq .02789$).

TABLE 4.3
SUMMARY OF THE MULTIVARIATE ANALYSIS OF VARIANCE
FOR THE EFFECT OF ENROLLMENT STATUS

Variable	Mean Square	F =	P ≤
Multivariate Test		14.50901	.00001
Univariate Test			
Academic	.00000	.00001	.9917
Career ^a	3.27977	5.45456	.02005
Financial	.00273	.00311	.95555
Institution ^a	81.15927	102.08955	.00001
Family ^a	3.80299	4.87322	.02789
Size ^a	4.96492	8.71588	.00336
Interaction	1.34752	3.05078	.08153
Autonomy	.27564	.52455	.46937
GPA ^a	1.95787	6.84538	.00925

^aIndicates significant difference at the .05 level.

5. Grade Point Average: The difference between the two groups with respect to their high school GPA was found to be significant at the .05 level ($F_{1,367} = 6.84538, P \leq .00925$).

Univariate Analysis of Variance indicated no significant difference between students who enrolled and those who did not enroll at the .05 level with respect to four of the nine dependent variables:

1. Academic Orientation: The difference between the academic orientation of the two groups was not found to be significant at the .05 level ($F_{1,367} = .00001, P \leq .99717$).
2. Financial Concern: The difference between the financial concern of the two groups was not found to be significant at the .05 level ($F_{1,367} = .00311, P \leq .95555$).
3. Autonomy: The difference between the two groups with respect to their concern with the distance of the institution from home was not found to be significant at the .05 level ($F_{1,367} = .52455, P \leq .46937$).
4. Interaction: The difference between the two groups with respect to their desire to interact

in an academic setting was not found to be significant at the .05 level ($F_{1,367} = 3.05078$, $p \leq .08153$).

The means and standard deviations of the two groups were computed. The results are shown in Table 4.4. Analysis of the results were used to test the directional hypothesis related to H_0 1:

- (a) Students who enroll will have a stronger academic orientation than students who do not enroll:
This hypothesis was not retained. No significant difference was found between the two groups with respect to academic orientation.
- (b) Students who enroll will have a stronger career orientation than students who do not enroll:
This hypothesis was not retained. Students who did not enroll had a stronger career orientation than those who did enroll.
- (c) Students who enroll will have less financial concern than students who do not enroll: This hypothesis was not retained. No significant difference between the two groups was found with respect to financial concern.



TABLE 4.4

MEANS AND STANDARD DEVIATIONS OF RESPONSES ON THE NINE
DEPENDENT VARIABLES FOR THE EFFECT OF ENROLLMENT STATUS

Variable	Mean	Standard Deviation
Academic		
Group 1 (enrolled: n=241)	.7385	.470
Group 2 (nonenrolled: n=130)	.7455	.571
Career ^a		
Group 1	1.2000	.779
Group 2	.9975	.763
Financial		
Group 1	2.2333	.890
Group 2	2.2605	1.024
Institution ^a		
Group 1	1.6990	.955
Group 2	2.7328	.780
Family ^a		
Group 1	2.4889	.897
Group 2	2.2659	.876
Size ^a		
Group 1	1.5583	.756
Group 2	1.7684	.770
Interaction		
Group 1	3.0486	.649
Group 2	3.1705	.691
Autonomy		
Group 1	1.0125	.751
Group 2	.9644	.670
GPA ^a		
Group 1	3.2961	.411
Group 2	3.4007	.417

^aIndicates those variables for which the Directional Hypotheses were not retained.

- (d) Students who enroll will have a stronger commitment to the institution than students who do not enroll: This hypothesis was retained. Students who enrolled had a greater commitment to the institution than students who did not enroll.
- (e) Students who enroll will have stronger family interest in education than students who do not enroll: This hypothesis was not retained. Students who did not enroll had stronger family interest in education than students who enrolled.
- (f) Students who enroll will have a greater large-school orientation than students who do not enroll: This hypothesis was retained. Students who enrolled had a greater large-school orientation than students who did not enroll.
- (g) Students who enroll will be more willing to leave home than students who do not enroll: This hypothesis was not retained. No significant difference was found between the two groups with respect to autonomy.
- (h) Students who enroll will be more interested in interacting in an academic setting than students who do not enroll. This hypothesis was not retained. No significant difference was found between the two groups with respect to interaction.

In summary, students who enrolled were less career oriented, more committed to the institution, had less family interest in education, had a greater large-school orientation, and had slightly lower high school grade-point averages than students who did not enroll.

No significant difference was found between the two groups with respect to academic orientation, financial concern, autonomy, and interaction.

Hypothesis 2

This hypothesis was formulated to obtain evidence about the second research hypothesis (Chapter I) which stated that there would be significant differences between out-of-state students who do not enroll and in-state students who do not enroll with regard to each of the nine characteristics identified. Further, it was hypothesized that out-of-state students who do not enroll would have greater financial concerns than in-state students who did not enroll. The corresponding null hypothesis which was tested was:

H₀ 2:

There are no significant differences between out-of-state first-time freshman admitted students who do not enroll and in-state first-time freshman admitted students who do not enroll with respect to any of the nine dependent variables.

This hypothesis was retained at the .05 level.
No significant difference was found between out-of-state first-time freshman admitted students who do not enroll and in-state first-time freshman admitted students who do not enroll with respect to the nine dependent variables ($F_{1,129} = 1.46485$, $P \leq .16858$). (See Table 4.5 and 4.6.)

In summary, the multivariate analysis of variance test was not significant. Therefore, no conclusions could be drawn about the univariate tests on each of the nine dependent variables. Further, the directional hypothesis relating to financial concern could not be retained. No significant difference was found between the two groups.

Hypothesis 3

This hypothesis was formulated to obtain evidence about the third research hypothesis (Chapter I) which stated that there would be significant interaction between student residency and student enrollment status with respect to the nine characteristics identified. The corresponding null hypothesis which was tested was:

H_0^3 :

There is no interaction between student residency and student enrollment status with respect to the nine dependent variables.

This hypothesis was retained. The interaction effect of residency by enrollment status with respect to

TABLE 4.5

SUMMARY OF THE MULTIVARIATE ANALYSIS OF VARIANCE FOR THE
EFFECT OF RESIDENCY STATUS OF NONENROLLED STUDENTS

	Variable	Mean Square	F =	P ≤
Multivariate Test			1.46485	.16858
Univariate Test				
	Academic	.00098	.00299	.95645
	Career	.58610	.10077	.75142
	Financial	1.27377	1.21638	.27212
	Institution	1.43387	2.38393	.12504
	Family	1.83821	2.42424	.12192
	Size	4.35608	7.72616	.00626
	Interaction	.08958	.18641	.66664
	Autonomy	.01452	.03216	.85796
	GPA	.06626	.37928	.53907

TABLE 4.6

MEANS AND STANDARD DEVIATIONS OF RESPONSES ON THE NINE
DEPENDENT VARIABLES OF NONENROLLED STUDENTS FOR THE
EFFECT OF RESIDENCY STATUS

Variable	Mean	Standard Deviation
Academic		
Group 1 (in-state: n=302)	.74386	.52187
Group 2 (out-state: n=69)	.75000	.69293
Career		
Group 1	1.01053	.76485
Group 2	.96296	.76751
Financial		
Group 1	2.19975	1.00469
Group 2	2.42063	1.07174
Institution		
Group 1	2.66842	.71284
Group 2	2.90278	.71284
Family		
Group 1	2.19298	.79535
Group 2	2.45833	1.04682
Size		
Group 1	1.88070	.67707
Group 2	1.47222	.92023
Interaction		
Group 1	3.15439	3.21296
Group 2	.64286	.81320
Autonomy		
Group 1	.95789	.66532
Group 2	.98148	.68981
GPA		
Group 1	3.38684	.40640
Group 2	3.43722	.44759

the nine dependent variables was not found to be significant at the .05 level ($F_{1,367} = 1.02464$, $p \leq .41959$). (See Table 4.7.)

In summary, the lack of joint influence of residency by enrollment status on the nine dependent variables allows the researcher to examine the main effects of enrollment and residency.

Hypothesis 4

This hypothesis was formulated to obtain evidence about the fourth research hypothesis (Chapter I) which stated that there is significant correlation between the nine characteristics. The corresponding null hypothesis which was tested was:

H_0^4 :

There is no significant correlation between the nine dependent variables.

Pearson-Product-Moment Correlation indicated no significant correlation between the nine dependent variables. The hypothesis was retained. (See Table 4.8.)

In summary, this hypothesis was tested to assure the independence of the dependent variables being analyzed. The variables were found to be independent of one another.

Hypothesis 5

This hypothesis was formulated to obtain evidence about the fifth research hypothesis (Chapter I) which



TABLE 4.7

SUMMARY OF THE MULTIVARIATE ANALYSIS OF VARIANCE FOR THE
INTERACTION EFFECT OF RESIDENCY STATUS BY
ENROLLMENT STATUS

	Variable	Mean Square	F =	P ≤
Multivariate Test			1.02464	.41959
Univariate Test				
	Academic	.09441	.36484	.54620
	Career	.03391	.05640	.81241
	Financial	.01725	.01964	.88862
	Institution	.20756	.26108	.60968
	Family	5.25759	6.73717	.00982
	Size	1.13059	1.98474	.15974
	Interaction	.52801	1.19542	.27495
	Autonomy	.11213	.21338	.64440
	GPA	.28601	.02267	.88040



TABLE 4.8
CORRELATION MATRIX FOR THE NINE DEPENDENT VARIABLES

	Academic	Career	Financial	Institution	Family	Size	Interaction	Autonomy	GPA
Academic	1.0000								
Career	.3279	1.0000							
Financial	.0430	.1006	1.0000						
Institution	-.0362	.0650	.1556	1.0000					
Family	-.1226	-.1524	-.1423	-.1663	1.0000				
Size	.1324	.0280	-.1018	.0945	-.1115	1.0000			
Interaction	-.3545	-.1555	.0731	.0839	.0908	.0920	1.0000		
Autonomy	.2286	.0101	-.0062	-.0656	-.0693	.1048	-.1154	1.0000	
GPA	-.0470	-.0309	-.1105	.1047	.0244	.0299	.0421	-.0881	1.0000

stated that there is significant correlation between items included in the questionnaire which constitute the substance of each characteristic. The corresponding null hypothesis which was tested is:

H₀⁵:

There is no significant correlation between items which constitute each variable.

Pearson-Product-Moment Correlation and Reliability

Analysis were used to assure that all items which made up each variable were correlated with each other and with the variable they represented. The hypothesis was not retained. (See Table 4.9.)

TABLE 4.9
RELIABILITY COEFFICIENTS FOR THE NINE DEPENDENT
VARIABLES

Variable	Items	Reliability Coefficient (Alpha =)
Academic	2,3,6,7,9,10	.73591
Career	11,12,13	.65938
Financial	17,18,19,20,22,23,24	.84032
Institution	25,26,27,28	.72494
Family	34,35,37	.56659
Size	43,47,48	.65599
Interaction	44,45,46	.68221
Autonomy	52,55,56	.80963
GPA	GPA	1.00000



In summary, this hypothesis assures that the items validly represent the variables, as defined by the researcher, and that the variables are reliable measures.

Summary

The results of testing Hypothesis 1 and its corresponding directional hypotheses demonstrated that there are significant differences with respect to some of the characteristics of enrolled and nonenrolled first-time freshman admitted students for Fall 1977: (1) as defined by the research instrument; (2) at the chosen university; (3) who were admitted before March 1, 1977; and (4) who had not cancelled their admission by the time that the questionnaire was mailed to them.

Students who enroll from this population are more likely to want to attend a large school, be more committed to the particular institution at the time of enrollment, be less career oriented, and have less family interest in education than students who do not enroll from this population. Their mean high school grade-point average is also slightly lower than students who do not enroll.

Analysis of the results from testing Hypothesis 2 and its corresponding directional hypotheses revealed that out-of-state nonenrolled students and in-state non-enrolled students do not differ significantly with respect to the nine characteristics identified. Further, no

interaction effect was found for residency x enrollment status on the nine characteristics identified.

Hypotheses 4 and 5 were proposed to insure the reliability of the research instrument. The final dependent variables and their components were established as a result of the testing of these hypotheses. The dependent variables should be independent of one another and items which compose each should be correlated with each other and the corresponding variable. Both empirical and rational techniques were used to accomplish this goal (28, 38).

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, AND SUGGESTIONS FOR FUTURE RESEARCH

This chapter contains a summary of the study, conclusions drawn from the analysis of the data, discussion of the results, and suggestions for further research.

Summary of the Problem and Methodology

The purpose of this study was to investigate any differences between the characteristics of first-time admitted freshman students who enrolled and those who did not enroll, at a particular university, for the fall of 1977 to determine:

1. If there were any significant differences between admitted first-time freshman students who enrolled and those who did not enroll with regard to nine characteristics identified, and further if those who enrolled would
 - (a) have stronger academic orientation
 - (b) have stronger career orientation



- (c) have less financial concern
 - (d) have a stronger commitment to the chosen college
 - (e) have stronger family interest in higher education
 - (f) have a greater large-school orientation
 - (g) be more willing to leave home (autonomy)
 - (h) be more interested in interacting in an academic setting
- than students who did not enroll;
2. If there were significant differences between out-state students who did not enroll and in-state students who did not enroll with regard to each of the nine characteristics identified, and further if out-state students who did not enroll would have greater financial concerns than in-state students who did not enroll;
 3. If there were any interaction between student residency and student enrollment status with regard to the nine characteristics identified;
 4. If there were significant correlation among the nine characteristics identified; and
 5. If there were significant correlation among items included in the questionnaire which constituted the substance of each characteristic.



Previous research indicated that students who attend college after high school are likely to have higher academic ability and come from families of higher socioeconomic status than students who do not attend. They also come from smaller families, bigger cities, and larger high schools and are likely to be male rather than female. Further, they are likely to have greater parental encouragement toward college than students who do not attend college.

Some research indicated that the proximity of an institution for higher education is related to college attendance. Yet, more recent studies contradict this finding. These studies indicate that students attend college for a variety of reasons, among them to (1) learn more about things, (2) get a better job, (3) earn more money, (4) meet new and interesting people.

Researchers stress that single reasons related to the choice to attend a particular institution cannot be isolated. The decision is a multivariate process and is related to a number of factors including (1) ability to achieve; (2) motivation, tastes, and aspirations; (3) cost; (4) the college's characteristics; (5) family characteristics; and (6) the influence of other alternatives.

The inability of an institution to match the student's needs as related to any one of these factors

may alter the student's choice of that institution, depending upon the importance of each factor to the student. The student examines the institution in light of needs based upon the image the student has of the institution--an image highly influenced by the student's own personal history and circumstances. According to previous research, students choose not to attend a particular institution because: (1) The institution is not the students' first choice school; or (2) The institution is too far from home. Other reasons for nonattendance at a particular institution include cost, size, and better programs elsewhere.

There appears to be a close relationship between appropriate initial choice and persistence at a particular institution. Further, the closer the perceived image of the institution which the student chooses is to reality, the more likely the student is to persist at the institution. Colleges and universities must assist students with a pertinent assessment of their institution. If this is accomplished, both the student and the institution will be better served.

The methodology used in some of the research related to persistence was adapted to the present study: a comparative study which predicts the likelihood of enrollment/nonenrollment by examination of the characteristics of admitted students prior to enrollment.

The population used for the study was first-time freshman admitted students to the chosen institution who (1) were admitted before March 1, 1977, for the fall term of 1977, and (2) who had not cancelled their admission by March 1, 1977. Adults, veterans, and foreign students were excluded because of their special characteristics. A stratified random sample of five hundred students was selected from out-state and in-state students belonging to this population.

Each of the students in the sample was asked to respond to a questionnaire developed by the researcher. The questionnaire was mailed March 7, 1977. A second mailing was sent April 15, 1977, to students who had not responded by that date and who still had not cancelled their admission. Seventy-five percent of the students returned the questionnaire.

The research design consisted of two independent variables: (1) student enrollment status which had two levels; (a) enrolled and (b) nonenrolled and (2) student residency which had two levels; (a) in-state and (b) out-state. There were nine dependent variables: (1) academic orientation, (2) career orientation, (3) financial concern, (4) commitment to the institution, (5) family interest in education, (6) size, (7) interaction, (8) autonomy, and (9) high school grade-point average.

Multivariate analysis of variance was used to test hypotheses related to the effect of enrollment status, residency status, and their joint effect upon the nine dependent variables. Pearson-Product-Moment Correlation and Cronbach's Coefficients of Reliability were used to verify the reliability and construct validity of the instrument (38).

Conclusions from the Analysis of the Data

The results of the analysis of the data justify the following conclusions:

1. There are significant differences between first-time admitted freshman students who enroll and those who do not enroll at the particular institution with respect to some of the characteristics identified, specifically (a) career orientation, (b) commitment to the institution, (c) large-school orientation, (d) family interest in education, and (e) high school grade-point average.

Further, students who enroll will (a) be less career oriented, (b) have a stronger commitment to the institution, (c) have a greater large-school orientation, and (d) have less family interest in education than students who do not enroll. The mean grade-point average of enrolled students will also be slightly lower than that of students who do not enroll.

Students who enroll are not significantly different from students who do not enroll with respect to (a) academic orientation, (b) financial concern, (c) interaction (interest in interacting in an academic setting), and (d) autonomy (willingness to leave home).

2. In-state students who do not enroll do not differ significantly from out-state students who do not enroll with respect to the nine characteristics identified.
3. There is no significant interaction effect of residency x enrollment status with regard to the nine characteristics identified.
4. The nine characteristics identified are not significantly correlated.
5. The items included in the questionnaire which constitute the substance of each characteristic are significantly correlated. And, each variable meets the test for construct reliability.

Discussion

The present study merely scratches the surface of that which needs to be done in the area of recruitment and retention research if the University is to meet competitive demands for the 1980s. However, the conclusions reached do provide indication that:

1. There are some differences between students who enroll and those who do not enroll.
2. There are types of students who are likely not to enroll.
3. Some of our past assumptions related to reasons why students do not enroll may be false. Two are particularly notable:
 - (a) Students who have strong financial concern are likely not to enroll; and
 - (b) Students who must leave home to attend the University are less likely to enroll.

The larger task, and as yet an unanswered question, is: once these differences between enrolled and non-enrolled students are identified, WHAT NEXT? Should the University encourage applications only from students who list the institution as first choice, who are not strongly career oriented, who only want a large school, or do not have particularly outstanding grade-point averages? Or, should the University direct itself to students who are likely not to enroll and attempt to change the image of the institution which these students hold?

If the University chooses the latter approach, how does the University develop a methodology for convincing the students who are likely not to enroll that the students' career aspirations can be met at the

institution, that the University does deserve strong commitment, that size should not be a major concern, that the University can meet the needs of students with particularly high grade-point averages?

The following are suggestions for future recruitment and retention strategy, as related to students who are likely not to enroll and, also, as related to the whole population which the present sample represents.

Implications of the Study for
Recruitment and Retention

Students who are likely not to enroll.--The characteristic for which there was the greatest difference between those who enrolled and those who did not enroll was commitment to the institution. The response mean of those who enrolled was 1.6990 and of those who did not enroll, 2.7328. Those who enrolled were more committed to the institution than those who did not enroll (see Table 4.5).

The office of admissions at the chosen university perceives its function to be one of service. Its mission is to tell students about the institution, answer questions, and be honest. However, because the institution is comprehensive and serves many purposes, its identity may not be sharp enough in the minds of the students it attempts to serve.

According to Astin, over 40% of applicants to higher education institutions attend their first-choice institution (6). The ACT Profile for the university at which this study was conducted indicates similar results for students who enroll at the institution (3). Many have chosen the University because their parents are alumni, or because of its perceived prestige.

In order to attract other admitted students who have not developed this "personal loyalty" to the University, the results of the study with respect to commitment to the institution suggest that the institution and its admissions office should spend more time describing and explaining not only the nature and purpose of higher education at a university, but the nature and purpose of the university recruiting. The University must give its clientele something with which to identify. The message to prospective students should speak to the needs and aspirations of students and relate the University's offerings to them.

For example, both groups of students had a strong academic orientation (see Table 4.5). However, those who did not enroll had a stronger career orientation than those who enrolled.

At the present time, when recruiting new students, the admissions officers at the University place great emphasis upon the diversity and flexibility of the

University. The "no-preference" major and ease with which majors can be changed the first two years are presented as very positive aspects of the University. In fact, approximately one-third of all entering freshmen enter as no-preference students. Thus, the fact that students who enroll are somewhat less career-oriented than those who do not enroll is not surprising to the author. Rather, it provides reassurance that this part of the admissions message has been heard.

However, an increasing number of students are becoming concerned about career opportunities. And, if the University is concerned about retaining more of the students who are admitted, the results of the study suggest that more emphasis on job possibilities during and after college should be a part of the message to prospective admitted students.

Some in academe cringe at the thought that one goes to college for job preparation. Yet, today's "student consumer" is most concerned about preparation for the future. A student is most likely to affiliate with an institution which he perceives will contribute most to his self-fulfillment, ultimate happiness, and success (traditionally a basic objective of higher education). Admissions officers at the University should stress what the institution's environment can contribute to job readiness as it relates to career development and personal development.

Even though those who enrolled had a greater large-school orientation, both groups, enrolled and non-enrolled, had a large-school orientation. Yet, each group was strongly interested in interacting with other students and professors in an academic setting. Those who did not enroll perhaps decided that interaction was more important to them than the advantages of a large school (see Chapter II, "How They Decide and What Factors Are Important in That Decision") and, as a consequence, chose a smaller school where the interaction was perceived as more likely. Unless the opportunities for this interaction in a large school setting--at the particular university--are spelled out to prospective students, it is likely that the students will not recognize the opportunity as a part of the University's offerings.

It is suggested that emphasis be placed upon these opportunities and confirmed through example. The honors college, independent study opportunities, seminars, assistantships, the availability of small classes, the residential colleges, the residence hall system at the University all provide opportunities within the University for interaction on an individual basis with other students and professors in the academic setting.

Students who did not enroll had, on the average, stronger family interest in education than students who enrolled. Given the other characteristics of students who did not enroll--higher high school grade-point



averages, less commitment to the institution, stronger career orientation, less of a large-school orientation--it is likely that the University loses many of these students to institutions which are perceived to be more prestigious. However, more research is needed before any conclusions can be reached with respect to the implications of this finding.

The findings point out the need for the University to present a more clear, precise image of itself to prospective students, relating student needs and aspirations to University offerings. Further, the University should continue to emphasize its excellent academic reputation while, at the same time, also stressing its excellent career counseling and placement opportunities. It should continue to emphasize the advantages of its size while, at the same time, accentuating the myriad of opportunities for interacting with other students and professors in the academic setting.

Interpretation of selected sample means.--Although the effect cannot be interpreted statistically because the null hypothesis related to residency was retained, in-state students who did not enroll appear to have less of a large-school orientation than out-state students who did not enroll (see Tables 4.5 and 4.6). It is suggested that admissions officers be more conscious of this fact when talking with in-state students, many of whom come



from small high schools and small towns. Examples of small group opportunities, reassurance, and the personal touch can help alleviate some of the concern about the size of the University. With concentrated effort, the students may begin to associate the "personal touch" with the University rather than the mega-university image about which they express concern. In addition, perhaps the students will begin to see that the advantages of the large size of the University outweigh the disadvantages of its size.

Financial consideration was not of great concern, on the average, to either group (enrolled, nonenrolled) of students even when the nonenrolled students were divided by state (see Tables 4.4 and 4.6). Perhaps this result can be partly explained by realizing that students with very strong financial concern probably do not apply to the University in the first place or that they are confident of receiving financial aid sufficient to meet their needs. It is suggested, therefore, that the Admissions Office should attempt to isolate the subgroups for which financial consideration is major and speak to their concerns. Emphasis on financial consideration need not be a special part of the message to the general population of admitted students.

The same rationale applied to financial concern could apply to autonomy: Perhaps those who are concerned



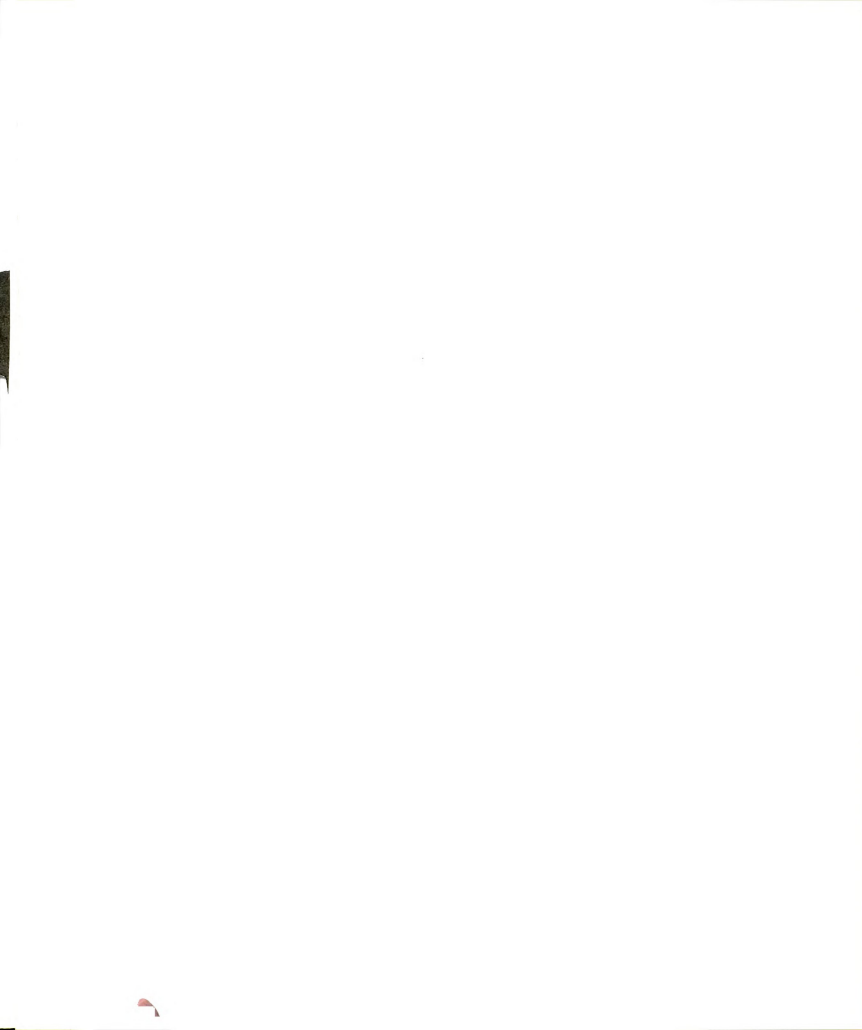
about having to leave home to attend college do not apply to the University in the first place. Neither group of admitted students (enrolled, nonenrolled) was concerned, on the average, about leaving home (see Table 4.4). Thus, the advantages/disadvantages of the residential setting need not be a part of the admissions office message--at least to students already admitted.

Summary

It is the opinion of the researcher that it is possible to retain more of the students admitted to the University. The differences in the characteristics of the two groups are, in general, related to needs of students which could be met by the institution. The information regarding career orientation and interaction is of particular import. Relating these needs and aspirations to institutional offerings may intensify student identification with the institution. If such is the case, those students will be much more likely to enroll at the institution and be better served by it.

Suggestions for Future Research

1. Replicative studies should be performed at similar institutions to determine if the results are transferable to other institutions.
2. The methodology applied to the present study could be used to examine the characteristics of



specific groups at the particular university. For example, a study could be initiated to compare the characteristics of National Merit semi-finalists who enroll with those semi-finalists who do not enroll. Students at different grade-point levels could be compared. Students from different socioeconomic levels, disadvantaged students, minority students who enroll or do not enroll could be compared.

3. A similar model could be used to survey all admitted students so that all admitted students (not just those admitted before March 1) could be studied.

OR

4. Students who are admitted before a particular date could be compared with students admitted after that date.
5. A study should be initiated which identifies the perceptions that on-campus students have of the University. These perceptions could be matched with the characteristics of students who are likely to enroll at the institution and the results used to publicize reasons for attending the institution.

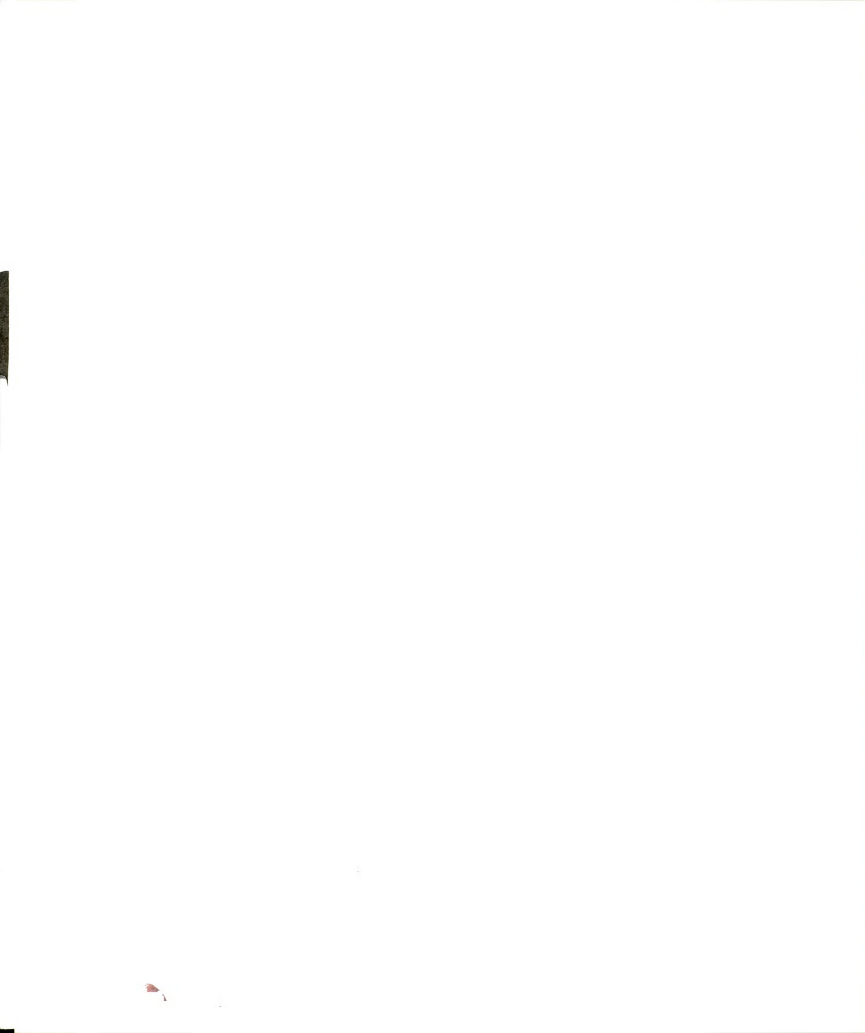
6. Follow-up research should be conducted on the students in the present sample who enrolled to ascertain if they persist and if their characteristics remain constant.
7. Follow-up research should be conducted on students who did not enroll to ascertain where they did attend.



APPENDICES

APPENDIX A

THE INITIAL LETTER AND QUESTIONNAIRE
MAILED TO STUDENTS IN THE SAMPLE



APPENDIX A

THE INITIAL LETTER AND QUESTIONNAIRE
MAILED TO STUDENTS IN THE SAMPLE

MICHIGAN STATE UNIVERSITY

OFFICE OF ADMISSIONS AND SCHOLARSHIPS
(517) 355-8332

EAST LANSING • MICHIGAN • 48824

March 7, 1977

Dear Student,

I am a member of the Admissions and Scholarships staff at Michigan State University. At the present time, I am completing the requirements for my doctorate in Administration and Higher Education at Michigan State.

The admissions staff and I are interested in learning more about the characteristics of students who apply and are accepted to Michigan State, regardless of their eventual college choice. As a consequence, I have chosen to do my doctoral research in this area.

I am enclosing a questionnaire which I hope you will take about 10 minutes to complete and return to me. Please note that your responses will in no way become a part of your record at M.S.U. Please do not sign the questionnaire.

For your convenience, I am enclosing a stamped, self-addressed envelope. Please return the questionnaire as soon as possible.

Thank you for helping me in this endeavor!

Sincerely,



Terrie Stevens
Associate Director

DIRECTIONS: Your responses will be read by an optical mark reader. Therefore, please use a black lead pencil (No. 2 1/2 or softer). Make heavy black marks that completely fill the appropriate block. Erase cleanly any answer you wish to change.

Completely block out the number next to each statement which best represents your reaction to the statement. Please respond to each statement.

- 1 = strongly agree
- 2 = agree
- 3 = indifferent
- 4 = disagree
- 5 = strongly disagree

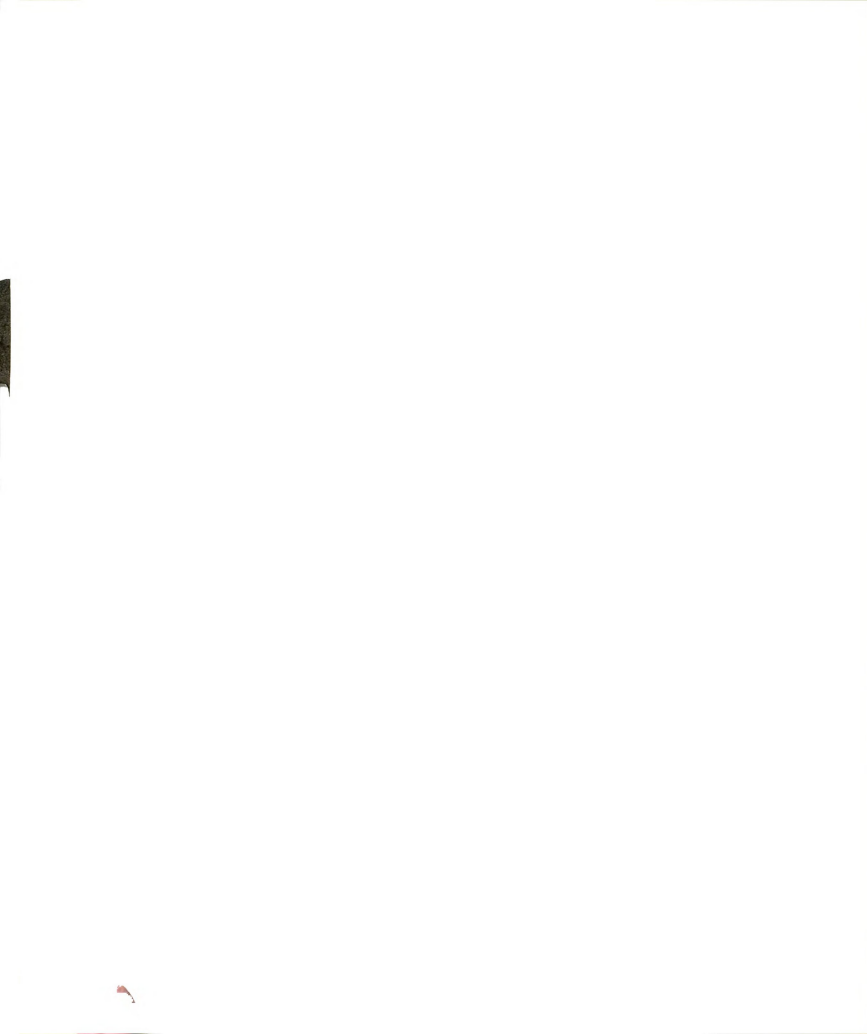
EXAMPLE: (a) I do not really want to go to college. If you strongly disagree with this statement, block out number 5.

-
- | | |
|--|------------------------|
| 1. I will probably have to study very hard to succeed in college. | 1. [1] [2] [3] [4] [5] |
| 2. A college degree means a great deal to me. | 2. [1] [2] [3] [4] [5] |
| 3. I think I can succeed in college. | 3. [1] [2] [3] [4] [5] |
| 4. I feel that my high school preparation is adequate for college. | 4. [1] [2] [3] [4] [5] |
| 5. I plan to pursue a graduate degree. | 5. [1] [2] [3] [4] [5] |
| 6. College will allow me to explore exciting new academic ideas. | 6. [1] [2] [3] [4] [5] |
| 7. The academic reputation of a college is very important to me. | 7. [1] [2] [3] [4] [5] |
| 8. It would be very disappointing if I had to drop out of college. | 8. [1] [2] [3] [4] [5] |
| 9. I want to go to college to improve my mind. | 9. [1] [2] [3] [4] [5] |



- 1 = strongly agree
 2 = agree
 3 = indifferent
 4 = disagree
 5 = strongly disagree

- | | |
|--|-------------------------|
| 10. I look forward to being able to take challenging courses. | 10. [1] [2] [3] [4] [5] |
| 11. I am fairly certain about my career plans. | 11. [1] [2] [3] [4] [5] |
| 12. A college degree is necessary for the kind of work I want to do. | 12. [1] [2] [3] [4] [5] |
| 13. I have chosen my present major because my abilities are closely related to this area. | 13. [1] [2] [3] [4] [5] |
| 14. I have chosen my present major because it is the best thing I can think of at this time. | 14. [1] [2] [3] [4] [5] |
| 15. I have chosen my present major because the financial rewards associated with it are very attractive. | 15. [1] [2] [3] [4] [5] |
| 16. I have chosen my present major because I already have a job promised to me in my major after I finish college. | 16. [1] [2] [3] [4] [5] |
| 17. I plan to work while I am in college. | 17. [1] [2] [3] [4] [5] |
| 18. My parents will finance at least 50% of my college education. | 18. [1] [2] [3] [4] [5] |
| 19. Unless I receive financial aid, I will not be able to attend a four-year college next year. | 19. [1] [2] [3] [4] [5] |
| 20. I plan to finance my own college education. | 20. [1] [2] [3] [4] [5] |
| 21. I have worked to save money for my college education. | 21. [1] [2] [3] [4] [5] |
| 22. I will probably have to take out an educational loan to finance my college education. | 22. [1] [2] [3] [4] [5] |



- 1 = strongly agree
2 = agree
3 = indifferent
4 = disagree
5 = strongly disagree

23. I will probably have no problem financing my college education. 23. [1] [2] [3] [4] [5]
24. My final decision regarding where I will attend will probably rest on the amount of financial aid I can receive. 24. [1] [2] [3] [4] [5]
25. I applied only to Michigan State because I am certain that I want to go there. 25. [1] [2] [3] [4] [5]
26. I applied to two or more colleges because I was not sure about which school I wanted to attend. 26. [1] [2] [3] [4] [5]
27. I applied to Michigan State because it was my first choice. 27. [1] [2] [3] [4] [5]
28. I applied to Michigan State because it is one of the few schools which offers the major I am interested in. 28. [1] [2] [3] [4] [5]
29. I applied to Michigan State because it has a good academic reputation. 29. [1] [2] [3] [4] [5]
30. I applied to Michigan State because the program I am interested in has a good reputation. 30. [1] [2] [3] [4] [5]
31. I applied to Michigan State in case I did not get admitted to my first choice school. 31. [1] [2] [3] [4] [5]
32. My parents feel that a college education is very important. 32. [1] [2] [3] [4] [5]
33. My parents have visited college campuses with me. 33. [1] [2] [3] [4] [5]
34. My parents have influenced my decision about a college choice. 34. [1] [2] [3] [4] [5]
35. My other relatives have influenced my choice of college. 35. [1] [2] [3] [4] [5]

- 1 = strongly agree
 2 = agree
 3 = indifferent
 4 = disagree
 5 = strongly disagree

36. I am probably the only one, including my parents, in my family who will attend college. 36. [1] [2] [3] [4] [5]
37. Part of the reason I want to go to college is because my parents want me to. 37. [1] [2] [3] [4] [5]
38. My best friend(s) has influenced my college choice. 38. [1] [2] [3] [4] [5]
39. My best friend(s) will go to the same college that I will go to. 39. [1] [2] [3] [4] [5]
40. My best friend(s) will not attend college next year. 40. [1] [2] [3] [4] [5]
41. My friends and I talk a great deal about our college plans. 41. [1] [2] [3] [4] [5]
42. Most of the kids in my class will probably not go to college next year. 42. [1] [2] [3] [4] [5]
43. I prefer a small school setting in which to pursue a college degree. 43. [1] [2] [3] [4] [5]
44. I hope to have the opportunity to get to know the professors who teach my classes. 44. [1] [2] [3] [4] [5]
45. I would prefer to be in classes with less than 30 students. 45. [1] [2] [3] [4] [5]
46. I would prefer to be in classes with more than 100 students. 46. [1] [2] [3] [4] [5]
47. I would probably make more friends at a small school. 47. [1] [2] [3] [4] [5]
48. I would prefer a small private school if I could afford it. 48. [1] [2] [3] [4] [5]
49. I am most comfortable in a small group of people. 49. [1] [2] [3] [4] [5]

- 1 = strongly agree
- 2 = agree
- 3 = indifferent
- 4 = disagree
- 5 = strongly disagree

- | | |
|---|-------------------------|
| 50. I want to go to a big school because it offers a greater variety of courses. | 50. [1] [2] [3] [4] [5] |
| 51. I want to go to a big school so that I can meet more people. | 51. [1] [2] [3] [4] [5] |
| 52. I would prefer to go to a college away from home. | 52. [1] [2] [3] [4] [5] |
| 53. I would prefer going to a college where I won't know many of the students before I get there. | 53. [1] [2] [3] [4] [5] |
| 54. I would prefer being able to spend most of my weekends at home while I am in college. | 54. [1] [2] [3] [4] [5] |
| 55. I want to go away to college because it will be good for me to get away from home. | 55. [1] [2] [3] [4] [5] |
| 56. I would prefer going away to college so that I could be on my own. | 56. [1] [2] [3] [4] [5] |
| 57. I enjoy participating in athletics. | 57. [1] [2] [3] [4] [5] |
| 58. I plan to be a member of at least one extra-curricular organization in college. | 58. [1] [2] [3] [4] [5] |
| 59. I plan to join a fraternity/sorority in college. | 59. [1] [2] [3] [4] [5] |
| 60. I enjoy discussing ideas with other people. | 60. [1] [2] [3] [4] [5] |
| 61. I would enjoy living in a dorm. | 61. [1] [2] [3] [4] [5] |
| 62. I would prefer to have a roommate next year I have known before. | 62. [1] [2] [3] [4] [5] |
| 63. I prefer being alone most of the time. | 63. [1] [2] [3] [4] [5] |

- 1 = strongly agree
- 2 = agree
- 3 = indifferent
- 4 = disagree
- 5 = strongly disagree

- | | | | | | | | |
|-----|--|-----|-----|-----|-----|-----|-----|
| 64. | I look forward to meeting new and interesting people in college. | 64. | [1] | [2] | [3] | [4] | [5] |
| 65. | I will probably not have much time to go to parties while I am in college. | 65. | [1] | [2] | [3] | [4] | [5] |

THANK YOU VERY MUCH!

APPENDIX B

THE FOLLOW-UP LETTER SENT TO NONRESPONDENTS

APPENDIX B
THE FOLLOW-UP LETTER SENT TO NONRESPONDENTS

MICHIGAN STATE UNIVERSITY

OFFICE OF ADMISSIONS AND SCHOLARSHIPS
(517) 355-8332

EAST LANSING • MICHIGAN • 48824

April 15, 1977

Dear Student:

About a month ago, I mailed to you a copy of the enclosed questionnaire. As of yet, I have not received a response from you. It is possible that you never received the mailing. Therefore, I am sending you another questionnaire in the hope that you will participate in this project.

I am a member of the Admissions and Scholarships staff at Michigan State University. At the present time, I am completing the requirements for my doctorate in Administration and Higher Education at Michigan State.

The Admissions Staff and I are interested in learning more about the characteristics of students who apply and are accepted to Michigan State, regardless of their eventual college choice. As a consequence, I have chosen to do my doctoral research in this area.

I am enclosing a questionnaire which I hope you will take about 10 minutes to complete and return to me. Please note that your responses will in no way become a part of your record at MSU. Please do not sign the questionnaire.

For your convenience, I am enclosing a stamped, self-addressed envelope. Please return the questionnaire as soon as possible.

Thank you for helping me in this endeavor!

Sincerely,



Terrie Stevens
Associate Director

TS/ar

Enclosure

SELECTED BIBLIOGRAPHY

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1. Abbott, Charles F. "An Investigation of the College Environmental Perceptions of Prospective College Freshmen and Their Relationships to the Choice of a College or University." Ed.D. dissertation, Michigan State University, 1967.
2. Abraham, A. A. Why They Did Not Enroll. Tallahassee, Florida: Florida Agriculture and Mechanical University, December 1974.
3. ACT Class Profile: 1976-77. American College Testing, Princeton, N.J., 1977.
4. Aiken, Lewis R. "The Prediction of Academic Success and Early Attrition by Means of a Multiple-Choice Biographical Inventory." American Educational Research Journal 1 (March 1964).
5. Anderson, C. Arnold; Bowman, Mary Jean; and Tinto, Vincent. Where Colleges Are and Who Attends. New York: McGraw-Hill, 1972.
6. Astin, Alexander. "The Characteristics and Attitudes of 1976-1977 Freshmen." Chronicle of Higher Education (January 10, 1977).
7. _____. Who Goes Where to College? Chicago, Ill.: Science Research Associates, 1965.
8. Baird, Leonard L. "Family Income and the Characteristics of College-Bound Students." American College Test: Research Reports, no. 17 (February 1967).
9. Bowers, Thomas A., and Pugh, Richard C. "Factors Underlying College Choice by Students and Parents." College Student Personnel 14 (May 1973).
10. Braskamp, Larry A., and Flessner, Duane. "The Congruency between Parental and Entering Freshman Expectation." The Journal of Student Personnel 12 (May 1971).



11. The Carnegie Commission on Higher Education. New Students and New Places. New York: McGraw-Hill Co., 1971.
12. Carrington, Christine H., and Sedlacek, William E. "Characteristics of No-Shows Accepted for Admission at a Large University." Journal of College Student Personnel 12 (November 1975).
13. College Student Profiles. Iowa City, Iowa: ACT, 1976-77.
14. The Condition of Education; 1976 Edition. Washington, D.C.: National Center for Educational Statistics, March 1976.
15. Cope, Robert G. "Interaction Models for Studies of College Dropouts." Institutional Research and Communication in Higher Education. University of Washington, 1970.
16. Cope, Robert, and Hannah, William. Revolving College Doors. New York: John Wiley and Sons, 1975.
17. Doermann, Humphrey. "The Future Market for College Education." A Role for Marketing in College Admissions. New York: CEEB, 1976.
18. Dole, Arthur A. "Stability of Reasons for Going to College." The Journal of Educational Research 63 (April 1970).
19. Dressel, Paul L. Handbook of Academic Evaluation. San Francisco: Jossey-Bass, 1976.
20. Feldman, Kenneth A., and Newcomb, Theodore M. The Impact of College on Students. San Francisco: Jossey-Bass Inc., 1969.
21. Fenske, Scott. College Student Migration. Princeton, N.J.: American College Testing, 1972.
22. Fenstemacher, William P. "College Dropouts: Theories and Research Findings." Tomorrow's Imperatives Today. The University of Washington: The Association for Institutional Research, 1973.
23. Glass, Gene, and Stanley, Julian. Statistical Methods in Education and Psychology. New Jersey: Prentice-Hall, 1970.
24. Gorman, Walter P. "An Evaluation of Student-Attracting Methods and University Features by Attending Students." College and University 51 (Winter 1976).

25. Green, Edith. "Who Goes to College?" College Management 5 (May 1970).
26. Hackman, J. Richard, and Dysinger, Wendell S. "Commitment to College as a Factor in Student Attrition." Sociology of Education 43 (Summer 1970).
27. Hammond, Ellis S. An Institutional Study of Cancelled Admissions. East Lansing: Michigan State University, 1972.
28. Hase, Harold D., and Goldberg, Lewis S. "Comparative Validity of Different Strategies of Constructing Personality Inventory Scales." Psychological Bulletin 64 (April 1967).
29. Huber, William H. "Channeling Students for Greater Retention." College and University 47 (Fall 1971).
30. Irvine, Donald W. "Ghost Applicants at the University of Georgia." College and University 40 (Fall 1964).
31. Ivens, Stephen H. "How Parents and Students Feel about Post Secondary Education." College and University 50 (Summer 1975).
32. Jones, Reginald L., and Siegel, Laurence. "Admission Cancellations: An Institutional Study." College and University 38 (Fall 1962).
33. Kandel, Denise, and Lesser, Gerald S. "School, Family, and Peer Influences on Educational Plans of Adolescents in the United States and Denmark." Sociology of Education 43 (Summer 1970).
34. Kotler, Phillip. "Applying Marketing Theory to College Admissions." A Role for Marketing in College Admissions. New York: CEEB, 1976.
35. Leafgren, Frederick Alden. "An Investigation of Images of the University and Student Role Expectations." Ph.D. dissertation, Michigan State University, 1968.
36. Magarell, Jack. "Public-College Enrollment Growth Appears to Be at a Standstill." Chronicle of Higher Education (November 1976).
37. _____. "Women Account for 93% of Enrollment Gain." Chronicle of Higher Education 15 (January 9, 1978).

38. Magnusson, David. Test Theory. Reading, Mass.: Addison-Wesley, 1967.
39. Mundel, David. "Student Choice and College Going." Change 6 (July/August 1974).
40. Nie, N.; Hull, C.; Jenkins, J.; Steinbrenner, K.; and Bent, D. Statistical Package for the Social Sciences: Second Edition. New York: McGraw-Hill, 1975.
41. "Overview of Self-Cancellation Responses." Orientation Office, Michigan State University, May 1974.
42. Pace, C. Robert. College and University Environmental Scales. New Jersey: Educational Testing Service, 1965.
43. Panos, Robert J., and Astin, Alexander. "Attrition among College Students." American Educational Research Journal 5 (1968).
44. "Participation in Postsecondary Education." The Condition of Education; 1976 Edition. Washington, D.C.: National Center for Educational Statistics, March 1976.
45. Pervin, Lawrence. "Reality and Nonreality in Student Expectations of College." Journal of Psychology 64 (1966).
46. Reid, W. A., and Holley, B. J. "An Application of Repertory Grid Techniques to the Study of Choice of University." The British Journal of Educational Psychology 42 (February 1972).
47. Richards, James E., and Holland, John L. "A Factor Analysis of Student Explanations of Their Choice of a College." ACT Research Report, no. 8 (1965).
48. Sheffield, Leonard E. "An Exploratory and Descriptive Study in the Application of Marketing Perspective to the College Choice Process: An Institutional Approach." Ph.D. dissertation, Michigan State University, 1975.
49. Smith, Daryll. "Personality Differences between Persisters and Withdrawers in a Small Woman's College." Research in Higher Education 5 (1976).

50. Starr, Ann; Betz, Allen L.; and Menne, John. "Differences in College Student Satisfaction: Academic Dropouts, Nonacademic Dropouts, and Nondropouts." Journal of Counseling Psychology 19 (1972).
51. Stewart, Michael, and Hannafin, Kathleen. Stabilization of Freshman Enrollment by Analysis of College Choice Factors and College Services. Fort Hays: Kansas State College Office of Institutional Research, January 1974.
52. Strodahl, Kalmer E. "Student Perceptions of Influences on College Choice." Journal of Educational Research 63 (January 1970).
53. Thresher, B. Alden. College Admissions and the Public Interest. New York: CEEB, 1966.
54. Tinto, Vincent. "College Proximity and Roles of College Attendance." American Educational Research Journal 10 (Fall 1973).
55. Trent, James W. "A New Look at Recruitment Policies." College Board Review, no. 58 (Winter 1965-66).
56. Trent, James W., and Medsker, Leland L. Beyond High School. Berkley, Calif.: Center for Research and Development, 1967.
57. Users Manual, Revisions and Local Options; SPSS. Northwestern University: Vogelback Computing Center, 1976.
58. Williams, James W. A Look at the Black College Applicant Who Does Not Register. Lorman, Miss.: Office of Institutional Research, Alcorn University, August 1976.
59. Zaccaria, Lucy, and Creaser, James. "Factors Related to Persistence in an Urban Commuter University." Journal of College Student Personnel 2 (July 1971).







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