

FACTORS RELATED TO THE WITHDRAWAL OF  
FRESHMAN STUDENTS AT OKLAHOMA  
STATE UNIVERSITY

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STATE UNIVERSITY

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## CHAPTER I

### THE PROBLEM

#### Background of the Study

The extension of formal education into the lives of more and more people has been one of the greatest social developments in the United States in recent decades (Carnegie Commission, 1973b). Hodgkinson (1971) maintains that the proportion of citizens engaged in formal education in America has never been attained by any other society in history.

During 1976 some 150 million Americans will be involved in a learning experience through a school or organization from which they may receive some sort of credit (Moses, 1970). Furthermore, by the year 2000, the percentage of the college-age population actually in college at any given time is expected to be about 50 per cent. That would mean that approximately 75 per cent of all high school graduates would be entering college by the end of the twentieth century (Carnegie Commission, 1971b).

The rapid increase in numbers attending educational institutions lends credence to the speculation that America, having accepted the idea of universal secondary education, seems to be moving toward some kind of universal educational

experience beyond high school. As a result of this movement, higher education, formerly restricted to the elite, became mass higher education, then universal access higher education (Carnegie Commission, 1973b).

Tickton (1968) predicted that by 1980 the national attitude toward higher education will develop to the point that at least two years of public post-high school education will be made available to all who seek it and can profit from it. By 1980 he estimates that 12,000,000 people will be enrolled in the nation's colleges and universities.

During the decades of unprecedented growth, not only have enrollment levels mushroomed, but the institutions have increased the quality and variety of their offerings. Responding to the demand for greater equality of opportunity in higher education, they have increased expenditures on student aid and on special programs aimed at facilitating the success of students with less than adequate preparation (Carnegie Commission, 1971a).

The result of this growth and innovation, plus accentuated inflation in the economy, has been a sharply increasing cost of education per student. Machlup (1962) estimated that if all costs of formal education are added up (and foregone earnings of students are included) about one-eighth of the national productive effort is spent on formal education. In 1971, Bowen figured that the costs per year to a student of a four-year college averaged approximately \$4600 (including lost earnings for the year). He figured cost per

student to the institution at \$4000. Costs to student and institution for one year of schooling totaled approximately \$8600. Costs have risen rapidly since Bowen's calculation and, unfortunately, at a rate exceeding the general rate of inflation (Committee for Economic Development, 1973).

Two major economic issues have emerged from these cost pressures. Many private institutions are unable to raise tuition levels high enough to cover their rising costs because of the competition from public institutions. At these public institutions, which are often closer to the student's home, comparable schooling at lower costs may be offered. Secondly, the public institutions are finding it difficult to secure the appropriations from the state legislatures due to competition with other agencies for state funds (Committee for Economic Development, 1973).

In view of the financial stringency characteristic of higher education in the 1970's, administrators responsible for the overall operations are intensely concerned with their efficiency. Bowen (1971) defines efficiency as "a ratio between two variables: cost and output. An increase in efficiency occurs, for example, when output increases while cost remains constant" (page 3). In the case of education, units of output and costs per unit are extraordinarily difficult to measure. Quantifying the measure of efficiency in institutions usually means defining the success of the college or university in terms of "cost per student" or "numbers of graduates." Consequently,

administrators are deluged with suggestions for more effective space utilization, increasing the teaching loads, eliminating course overlap, and reorganization of administration. In the discussions of efficiency, mention is usually made of attrition (a potential reduction in the number of graduates) as a waste of time and resources for the institution and students, but suggestions for eliminating this problem are not as abundant (Cheit, 1971; Bowen, 1971; Lumsden, 1974).

The present study addresses itself to that aspect of efficiency in higher education that is defined in terms of human resources--the reduction of the rate of attrition and an increase in the production of a more highly educated citizenry.

### Need for the Study

#### Attrition Rates

According to the research by Iffert (1958) it appeared that in 1957 slightly less than 40 per cent of the freshman class of colleges and universities across the nation would remain at the institutions of first enrollment to graduate four years later. Though an additional 20 per cent were predicted to go to other institutions where they could graduate in four years or more, it still remained that only six out of every ten freshmen were predicted to eventually receive degrees.

Summerskill (1962) reviewed 35 different studies that cited attrition rates for classes from 1932 to about 1960.

Median values were computed, indicating that the median loss of students in four years was 50 per cent, and the median per cent graduated was 37 per cent. Additionally, he found another 20 per cent graduated at some college some day.

The Carnegie Commission (1971a), reporting data based upon degree statistics and attrition studies made available to them, indicated that six out of every ten students enrolling in the fall of 1971 would fail to receive the degree to which they aspired.

A more recent nation-wide study by Astin (1972) showed that persistence rates for college students in the United States are substantially higher than have been reported in earlier studies (e.g., Newman, 1971; Trent and Medsker, 1968; Astin and Panos, 1969). Astin found that 61 per cent of the men and 56 per cent of the women either received a degree from their first institution or were still enrolled in that institution after four years. However, the total number of all students who received a degree or who were still enrolled represented only 58.5 per cent of all those who had entered college four years previously.

### The Loss to Society

The society today seems to be reassessing the relative value of a college degree; there is a mild scepticism because a college degree is no longer ready assurance of a job. Yet the public still regards colleges and universities as major instruments for improving the quality of life and

for preserving the essential features of the kind of society that it wants to have.

The strength of the democracy in the nation depends to a degree on an educated citizenry. Elementary and secondary schools provide the basic literacy and communication skills essential to good citizenship. But the development of public policy, conduct of public affairs, and cultivation of discriminating civic leadership depends generally on more advanced education (Committee for Economic Development, 1973, page 19).

Schultz (1971) defines an "allocative" benefit of higher education as

the ability to discern new opportunities, to evaluate and to act upon them, and to live in a world where economic growth constantly creates disequilibria; these are the qualities more typical of the educated man and they contribute to the well-being and progress of society as a whole (page 11).

The Carnegie Commission (1973a) reported that raising the educational level of a society tends to raise the productivity of that society's labor force in a manner that adds to the economic returns of all factors of production, not just to those who have directly benefited from that education.

When students are lost to higher education through attrition, the benefits of higher education are lost to society.

#### Losses to Institutions of Higher Learning

When students leave school, colleges lose money. As Summerskill (1962) points out, most colleges depend upon student fees as a portion of their resources to cover operating costs. Though tuition income in 1973 amounted to only about 30 per cent of the total education income (Carnegie

Commission, 1973a), a reduction of a significant portion of that 30 per cent due to attrition could prove disastrous to an institution that already has an unbalanced budget. Numbers of students enrolled at an institution become even more important when considering the fact that appropriations of funds from state legislatures and other sources are received by the institutions on a per student basis. Thus, colleges are concerned with increasing admissions and reducing attrition.

Another less readily apparent effect of attrition upon the institutions is the loss of prestige they may suffer if attrition rates are high. Colleges and universities are seen by many as centers for the preparation of students for careers. In this tradition, when students fail to complete their preparation, disappointment and hostility are often directed at the college. The institution is criticized for doing a "poor job" even though the quality of teaching may actually be exceptional (Summerskill, 1962). When the institution loses prestige or the confidence of the public, student enrollment drops, as does the level of income derived from student fees. Additionally, an institution that develops a questionable reputation in educational circles is unable to attract well-qualified faculty, upon whom the very existence of superior academic programs is dependent.

### Losses to the Students

When college students drop out--leave without any formal recognition--many must have a sense of disappointment, even resentment (Carnegie Commission, 1971a). Pitcher and Bloushild (1970) have indicated that college failure is interpreted as a total inadequacy on the part of many students. This distortion has created a highly emotional and frequently irrational climate which can profoundly affect a young person and his family.

In addition to the adverse psychological effect that dropping out of school may have on a student, there are other more tangible problems that he must face in the job market. Credentials are becoming increasingly more important because employers sometimes bar less educated persons from occupations with better advancement potential on the assumption that a college education promises higher productivity (Carnegie Commission, 1973a). The student who leaves college without any credentials may become quickly disillusioned by the number of doors that remain closed to him.

### Arguments for Dropping Out

Many students who do not persist to graduation will go on to attain their full potentialities as citizens and individuals. The Carnegie Commission (1973a) estimates that the most successful one-third of American high school graduates will do better financially than about one-third of the college graduates.



Students' decisions to discontinue their college educations may be influenced by the fact that jobs have changed in the past two decades. Formerly, the ideal preparation for a career was a long-extended formal education in advance. Today, more jobs require some basic skills and knowledge in advance and then a willingness to keep on learning while on the job. Thus, the Carnegie Commission (1971a) recommended that students be encouraged to participate in programs that provide service and other employment opportunities between high school and college, as well as stop-out points during matriculation. In other words, they favor "opportunities in lieu of formal college and more stages at which college-going students can change direction, stop out to obtain non-college experiences, and drop out with formal recognition for work accomplished" (Carnegie Commission, 1971a, page 11).

#### Summary

Many students who decide that they do not belong in traditional four-year degree programs do not reach that conclusion until after they have already enrolled at a particular institution or in a particular program. When they experience general discontent, lack of interest and progress, poor academic evaluations (grades or non-grades), dropping out in order to search for a better alternative would seem to be a logical course of action.

Another type of student for whom attrition would seem desirable has been identified by the Carnegie Commission

(1972) as the reluctant attender. These students are motivated by outside pressures to attend a college or university. In counseling they should be encouraged not to enroll initially at a particular institution, or they should be encouraged not to persist if they are not making minimal progress at an institution and exhibit no apparent interest in doing so.

On the other hand, it has been shown that many believe that there is a close relationship between the well-being of a society and the median years of formal education completed by its citizens. It can be argued that it is generally good for individuals to obtain all the formal education which they are capable of assimilating (Oklahoma State Regents, 1964).

According to the Carnegie Commission (1973a):

Education enhances the process of socialization; the college experience on balance tends to change the attitudes of students in the direction of the dominant norms in American society. Among the more highly educated there is a greater sharing of aesthetic and cultural values, more active political involvement, a greater sense of tolerance toward diverse economic, social, and political change (page 80).

If it may be assumed that the more students who persist to graduation, the greater the potential of the society, it follows logically that the public should encourage all qualified people to seek advanced training, and should discourage the withdrawal of capable youth from college as wasteful of both financial and human resources. Certainly the high attrition rates which occur in the freshman year of college should not be regarded as either normal or inevitable, since

the majority of students who leave during their first two semesters are intellectually capable of completing a challenging academic program (Oklahoma State Regents, 1964).

Many agencies charged with the responsibility of policy-making in the areas of admission, retention, and student services, are being asked to make decisions without knowing what the consequences of their actions will be in the lives of students and the institutions. Current reliable information about students which will reduce the margin of error in these decisions is needed.

It is hoped that this study will provide data which will aid those in student personnel and academe in identifying and developing those support services that would encourage persistence of students until the completion of their bachelor's degree, in order to prevent the loss of talent represented by those students who prematurely discontinue their education.

#### Statement of the Problem

The problem of this study concerns the relationship that exists between the withdrawal of freshman students in the College of Arts and Sciences at Oklahoma State University and selected personal, academic, and social factors.

Generally stated, the purpose of this study is to determine if there were significant differences between those members of the 1973 freshman class of Oklahoma State University who withdrew during their first year of college and those who returned for their second year. More specifically, it is the

objective of the investigator to:

1. determine the relationship of selected biographical and academic factors to persistence or withdrawal among the subjects of this study.
2. determine the relationship of satisfaction with the general college community to persistence or withdrawal of the students investigated.

The procedure used in the first objective involved the analysis of data from student personnel records and biographical information obtained directly from subjects in an attempt to identify significantly distinguishing differences between persisters and non-persisters.

The second objective will involve an effort to secure responses of subjects concerning those impressions of certain aspects of the college community during their enrollment at Oklahoma State University which may have been related to their decisions to continue or discontinue their pursuit of an undergraduate degree.

Such a study could be useful to those counselors and administrators in higher education who are concerned with the retention of college freshmen.

#### Limitations of the Study

The writer recognizes and acknowledges certain limiting elements of the study which must be considered.

A study based on only one group of college students has at least one inherent limitation: What is true for one group

of students may not have universal validity for other groups of students. To the extent, then, that the 814 students being studied are atypical, the conclusions reached in the present study may have limited validity for other groups of students. Generalizations to the Arts and Sciences freshmen, or to the freshman class at Oklahoma State University (1973) cannot be made.

Only certain psycho-social data were used in this study, primarily because it was necessary that certain limitations of size and complexity be observed in order to develop a study of manageable breadth. It is doubtful that all factors related to attrition are known. It appears however, that there are elements that have an influence upon a student's persistence which are not considered in this study. The psycho-social factors chosen are related to the hypotheses being tested and have often been mentioned in the literature as possible contributors to the attrition of college students.

The instrument designed to elicit responses concerning the subjects' satisfaction with the college environment was given at the beginning of Fall 1973. It was necessary to gather data that early in the year so that the responses of those who would drop out in the third or fourth week of school might be recorded. However, because subjects were tested so very early in their college careers, they may have been asked to make premature judgements based upon limited experiences in the college environment.

### Assumptions

In this study designed to ascertain some of the differences between persisters and non-persisters, decisions concerning the selection of subjects, the selection and use of instruments, and the statistical treatment of the data were based upon certain assumptions.

Upon entering Oklahoma State University, all freshman students are asked to complete a form containing certain biographical information which becomes part of their permanent records. The items of information from these records used in the study were considered to be valid reports by the subjects and were accepted as sufficiently valid for the purpose of the research.

Specific academic information concerning the level of educational development attained by each student was taken from personnel records. It was assumed that high school grade point averages represented valid judgements of instructors concerning academic performance of the subjects.

Finally, the study was conducted with freshman subjects who were not enrolled as special students. It was, therefore, assumed that those subjects included in the research were enrolled in courses of study leading to an undergraduate degree.

### Hypotheses

This study was designed to delineate differences between two groups of students--Group A, which includes those

students who persisted at the university to begin their second year of college, and Group B, or those freshman students at Oklahoma State University who withdrew during their first year and/or failed to re-enroll for the 1974-75 academic year. Forty-six hypotheses were tested:

- I. There is no significant difference between persisters (Group A) and non-persisters (Group B) with regard to:
  - a. high school grade point average.
  - b. high school rank in class.
  - c. ACT composite standard score.
  - d. number of credit hours in which enrolled.
  - e. number of hours devoted to study per week.
  - f. participation in extra-curricular organizations.
  - g. membership in a fraternity or sorority.
  - h. number of leadership positions assumed.
  - i. type of residence.
  - j. number of hours devoted to self-support per week.
  - k. age.
  - l. sex.
  - m. marital status.
  - n. ethnic group.
  - o. choice of major.
- II. There is no significant difference between Group A and Group B with regard to the degree of satisfaction expressed with the college community.

- III. There is no significant difference in the degree of satisfaction expressed by subjects classified according to:
- a. high school grade point average.
  - b. high school rank in class.
  - c. ACT composite score.
  - d. number of credit hours in which enrolled.
  - e. number of hours devoted to study per week.
  - f. participation in extra-curricular organizations.
  - g. membership in a fraternity or sorority.
  - h. number of leadership positions assumed.
  - i. type of residence.
  - j. number of hours devoted to self-support per week.
  - k. age.
  - l. sex.
  - m. marital status.
  - n. ethnic group.
  - o. choice of major.
- IV. There is no significant difference between Group A and Group B with respect to satisfaction with their college life when controlling for:
- a. high school grade point average.
  - b. high school rank in class.
  - c. ACT composite standard score.
  - d. number of credit hours in which enrolled.
  - e. number of hours devoted to study per week.
  - f. participation in extra-curricular organizations.



- g. membership in a fraternity or sorority.
- h. number of leadership positions assumed.
- i. type of residence.
- j. number of hours devoted to self-support per week.
- k. age.
- l. sex.
- m. marital status.
- n. ethnic group.
- o. choice of major.

The .05 level of confidence was used to determine the significance of the relationships.

#### Definition of Terms

A number of terms are used in the study which should be defined for clarity in reading.

1. Non-persister--Any subject who was originally enrolled at Oklahoma State University as a first-time freshman during the 1973 fall semester, but who discontinued his enrollment at some point during his first year, and/or did not re-enroll for the 1974 fall semester.
2. Persister--A subject who completed his first year of college and began the 1974 fall semester.
3. First-time freshman--A student who was not enrolled at any college or university prior to the fall of 1973.

4. American College Test (ACT)--A test developed to measure as directly as possible the abilities a student has that can be applied to his college course work. The composite standard score only will be used in this study.
5. College Student Satisfaction Questionnaire (CSSQ)--An instrument developed by Betz, Menne, and Klingensmith (1970) designed to measure student satisfaction with college life as an analogue to job satisfaction.
6. Student Satisfaction Questionnaire (SSQ)--A brief instrument designed by the author to measure the degree of satisfaction the subjects felt with the general college community at the beginning of the subjects' freshman year. Items taken from the CSSQ, as well as original items were included in the instrument.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Research studies on the retention and withdrawal of college students abound by the hundreds in the published literature. While two national studies of consequence in the area of attrition have emerged during the last two decades (Iffert, 1958; Astin, 1972), the majority of the studies have been confined to the individual campus level. Those investigations that have concentrated on the student and attrition (as opposed to those that study characteristics of institutions and their relationship to the attrition problem) may usually be classified into two major categories: (1) those that analyze intellectual-academic factors that affect persistence in college, and (2) those that examine non-intellectual factors affecting persistence in college.

#### Intellectual and Academic Factors

##### Related to Attrition

##### High School Preparation

Despite variations in grading policies, the high school records of students are considered valuable indicators of college potential and persistence. Summerskill (1962) found

that in ten of eleven studies in his review of the literature, dropouts had lower average grades in secondary schools than did graduates.

Astin (1972) reported a consistent relationship between academic performance in high school and persistence at four-year institutions. Students with A or A+ averages were nearly three times as likely to receive their bachelor's degrees within four years as were students who made grades lower than a C in high school.

In a study at the University of Nebraska, Charles (1948) found high school rank in class to be positively related to persistence in college. Of the 300 subjects who were in the top quarter of their high school classes, the number continuing each year was a greater percentage than that of the average student body. Demitroff (1974) in his study of student persistence at the University of Iowa, reported that rank in high school class was the chief discriminator between those students who persisted and those who cancelled. Studies by Chase (1970) and Morrissey (1971) reported similar findings.

A study of one high school class done by Pulcrano (1969), however, did indicate that class ranking was not necessarily predictive of college success, although a much lower proportion of those entering college from the lower third of the high school class actually graduated.

Persistence in college is also closely related to academic ability as measured by admissions tests. In Astin's study (1972), students in the highest interval of the American College Test (ACT composite greater than 31) were more than twice as likely to obtain the bachelor's degree after four years than were students in the lowest interval (ACT composite lower than 17).

A study of Oklahoma students prepared by the Oklahoma State Regents for Higher Education (1964) indicated that nearly one-half of the subjects who scored in the lowest quartile on the ACT battery dropped out during the first two semesters, whereas less than one-fourth of those scoring in the highest quartile dropped out.

How a student performs in his high school environment, in both the academic and the extra-curricular realms, is definitely a portent of his persistence in college. Chase (1970) reported that when the extra-curricular program was divided into student government/academic clubs and non-government/non-academic clubs, persisters in college were proportionately over-represented among those who took part in a combination of two or more kinds of activities. Non-persisters tended to be proportionately over-represented in non-government/non-academic clubs and in no activities at all. The potential dropout clearly spent his out-of-class hours in high school away from the policy-making and supplementary academic activities of his institution.

### Vocational Choice

One of the academic factors that may affect persistence of a college student is his choice of major or vocational direction. Sexton (1965), in her survey of research on attrition, reported that vocational choice, regardless of the degree of stability, tends to facilitate academic performance. Weitz, Clark, and Jones (1955) reported that the motivating effect of having chosen a major field of study before entering college influenced academic performance of the freshman subjects of their investigation. Their study indicated that when scholastic aptitude was held constant, male subjects who reported that they had selected a major field of study before entering college performed better in college than those who reported no such choice.

The findings of Dole (1969) indicated that when various attitudes, characteristics, and plans were analyzed, the defaulters of his study were shown to have less commitment to long-term vocational and educational goals than were persisters. Similar results were reported by Demitroff (1974), who found that as compared to persisters, "cancelers" were less satisfied with vocational plans and less certain about their educational plans. Nearly one-half were undecided about a major field of study. Astin's study (1964) also indicated that being less than well-satisfied with initial career choice predicted dropping out among male subjects.

A contradiction of these findings was reported by Abel (1966). He conducted a study of male students at a small

liberal arts college to test the hypothesis that a student whose statement about vocational and/or academic goals expressed certainty and whose grade point average was below a 2.0 at the end of the first year of college, would probably not graduate. The hypothesis had both statistical and practical significance, since loss from this group was 75 per cent, as compared to an average loss of 37.1 per cent in the other groups (high ability-high certainty, high ability-low certainty, low ability-low certainty).

Generally, however, the literature seems to indicate that, when ability is adequately controlled for, students who are more certain of their occupational choice or who have definitely chosen a major field of study are more likely to persist than students who are unsure of the goals they wish to pursue.

#### Academic Performance in College

Withdrawals that occur during the freshman year are due largely to poor academic performance in college (Sexton, 1965). A state-wide attrition study published by the Oklahoma State Regents for Higher Education (1964) supported this conclusion. In the Regents' study, it was reported that approximately one-half of the freshmen who dropped out of Oklahoma colleges during 1962-63 left for academic reasons (i.e., their grade point averages were less than 1.5 on a 4.0 scale). Rose and Elton (1971) also found that a large percentage (72 per cent) of those who left were not in good

standing academically at their departure, although their mean ACT score was above the mean for their entering class. Morrisey (1971) and Munger (1954) also found that persistence was reliably associated with first semester grade point averages in college. Furthermore, Munger's study (1956) showed that students who did not achieve the grade point average near what they expected (as a carry-over from high school) were likely to withdraw from college.

### Extra-Curricular Activities in College

Social integration at college also seems to play a positive role in persistence. Tinto (1975) points out that participation in activities appears to have no deleterious effects and may even strengthen goal commitment in college. Supporting the position of Tinto were the findings of Jex and Merrill (1962), who reported that those subjects in their study who were socially active persisted to graduation in a significantly greater number than those who were socially inactive.

Contradicting Jex and Merrill (1962), however, Iffert (1958) found that the extent of participation in organized extra-curricular activities was not related to persistence to graduation among his subjects, although non-graduates devoted more time to these activities during their freshman year than did graduates.

Iffert's study (1958) did point out that fraternity and sorority membership was clearly associated with persistence



to graduation. Moreover, institutions which had not recognized fraternities or sororities had a significantly lower graduation rate than did institutions at which an opportunity for some type of fraternity or sorority membership was available.

The results of Willingham's study (1962) concurred with Iffert's (1958). Willingham found that in the three categories of attrition defined in his study--withdrew, withdrew and went to night school, or dropped by the university--fraternity members had significantly lower attrition rates than non-fraternity members.

#### Non-Intellectual Factors Affecting Persistence in College

##### Sex

According to Summerskill (1962), studies over the years have either shown little sex differences in attrition rates or somewhat less attrition among women at certain colleges. Iffert's study (1958) reported such findings. In his investigation, 27.4 per cent of the men had left by the end of the first year, while 27 per cent of the women had left. The rate of graduation in regular progression (four years after first enrollment) from an institution of first registration was 39.5 per cent for the entire sample, with 38.8 per cent of the men and 40.5 per cent of the women graduating. (The higher percentage of men who entered the fourth year but did not graduate was partly attributable to predominantly male

enrollment in extended programs, such as engineering and architecture.) Astin's study (1972) reported similar conclusions.

In a study by Brabant and Garbin (1974), it was found that students who had female-typical experiences seem to have a better chance of persisting in higher education than do those with male-typical experiences. Students at the University of Georgia were asked to answer an experience and attitude inventory. They were then classified as sociological males, sociological females, and undifferentiated, according to whether they gave a greater number of male-typical or female-typical choices, or an equal number of male- and female-typical choices, or no sex-typical choices. The responses in 7 out of 12 categories showed higher persistence among sociological females than among any other group. Among the males, those defined as sociologically female showed higher persistence than did those defined as sociologically male.

Albino (1973) studied sex differences of factor dimensions related to withdrawing from college. She found that women who withdrew from college scored higher than men in the areas of personal-psychological concerns, poor academic skills or grades, dissatisfaction with residence, and lack of time for extra-curricular activities. The men, on the other hand, scored higher in areas of financial or employment problems, career-related concerns, and health-related concerns.

Faunce (1973), in studying differences between men and women in high, middle, and low ability groups, found that there was higher achievement and less persistence among women, and lower achievement but greater persistence among the men. Baccalaureate degrees were awarded to 47 per cent of the women and 56 per cent of the men. Proportionately more women in the higher ability group graduated than men.

#### Ethnic and Socio-economic Background

While the personal characteristics of students are significant variables to be studied when searching for factors related to persistence or non-persistence in college, an investigator cannot overlook the social milieu in which the student has been reared. His ethnic background, the family income, the level of education of his parents, the composition of his family (in terms of numbers and sex) have all been explored as possible predictors of college persistence.

Drop-out statistics compiled on the basis of students' racial background in Oklahoma revealed that freshmen who classified themselves as "white" had the highest retention rates during the 1962-63 academic year in Oklahoma colleges (Oklahoma State Regents for Higher Education, 1964). The retention rates of whites was 64 per cent, for blacks 61 per cent, and for American Indians 54 per cent.

The idea that black students do not persist as well as white students was not supported by Selby's study (1973), however. When the two groups were matched, especially on

socioeconomic background and scholastic ability, they persisted through the freshman year on an almost equal basis.

Socio-economic status as a determinant of academic performance has been a concern of a number of investigators, many of whose findings were reviewed by Lavin (1965). He offers the following explanation of how socioeconomic status (SES) can be predictive of school performance:

. . . SES is a derivative or summarizing variable. Persons of different socio-economic status face different kinds of life situations, and in adapting to them, they may develop different sets of values, attitudes, and motivations related to academic performance. There are two major factors symbolized by SES: one is intelligence; the other is what may be referred to as the "achievement syndrome" (page 123).

An investigation of the relationship between the socioeconomic status and attrition of students at Howard University compared three groups of students categorized according to family income and parents' educational level (Stanfiel, 1973). There was a significant difference between the attrition rate of Group I, or students whose annual family income was less than \$6000 and whose parents had not graduated from high school; and Group III, or those students whose annual family income was \$10,000 or more and whose parents were college graduates. At the end of two years, 40 per cent of the first group had withdrawn, as compared to 22 per cent of Group III.

In Astin's study (1964) all four items pertaining to socio-economic level--mother's education, father's education, father's occupation, and number of peers attending college--

predicted dropping out for high ability students at the .001 level of significance for both sexes.

Usually the research indicates that the higher socio-economic levels produce students who are likely to have higher rates of persistence in college. However, an investigation from Arkansas A. and M. College found that students from low socio-economic backgrounds (principally, low income families) performed better than other students from higher income families (Jones, 1971). Their grade point averages were higher and the rate of withdrawals was lower.

Barger and Hall (1965) concluded from their study of college students that the socio-economic status-attribution relationship disappears when ability is controlled as a factor. That is, dropping out is more a function of ability (or lack thereof) than it is of socio-economic level.

Barger and Hall (1965) also found that parents' current marital status, another indicator of socio-economic background, had a significant association with dropping out for some of the students in the study. Upper-ability males and lower-ability females from broken homes (i.e., homes in which the parents are divorced or widowed) dropped out at a significantly higher rate than did upper-ability males and lower-ability females from intact homes. A study by Weitz and Wilkinson (1957), on the other hand, concluded that there were no statistically significant influences upon the academic performance of college freshmen due to the loss of one parent or both (whether through death or divorce).

## Personality Traits

Personality characteristics, as well as other non-intellectual factors, appear to be important determinants of success in college. In light of this fact, many investigators studying academic performance and persistence focus upon a list of specific personality variables, such as achievement motivation, "personality style," manifestations of pathology, and many others.

In his study of achievement motivation, Lueptow (1973) found that there was no relationship between need for achievement and continuance in college of his male subjects, as measured by the Thematic Apperception Test (TAT). Ashbaugh and her associates (1973) obtained similar results in their study of disadvantaged students and their performance on the Sentence Completion Test.

Contrary to the findings of the two preceding studies were those of Irvin's investigation (1967). He found that there existed a positive relationship between need for achievement and academic performance. There was a significant difference in the needs achievement scores of those who successfully completed their first year in college and those who failed.

Heilbrun (1962), using the ACL Need Scale which he developed from the Gough (1957) Adjective Check List, found that dropouts have a lower need for achievement along with a higher need for change.

Lavin (1965) concluded that the results of studies using projective measures of achievement motivation (such as the TAT and the Sentence Completion Test) were inconsistent. Some have found projective measures to be positively related to performance, while others have found no relationship. Lavin did report, however, that questionnaire measures of achievement needs provide consistent and positive relations with academic performance, though these relationships were not very strong. In general, research does not indicate that achievement motivation is significantly related to academic success or persistence.

In a discussion of the personality "style" of a group of students who withdrew from college during their first year, Freedman (1956) described the dropout in the following manner:

. . .not cooperative, dutiful, agreeable, and the like. Rather, these students tend to be assertive, somewhat rebellious toward authority, and unconventional. . . . They tend to be resentful of college regulations or prescriptions, social or academic, and so they find adjustment to the College community very trying, if not impossible (page 20).

Freedman's assessment of the personality types of dropouts is supported by Faunce's study (1968). She compared academically gifted women who dropped out before receiving a baccalaureate degree and those who graduated. Faunce found that the dropout subjects were faced with problems of impulse

control, aggressive behavior and hostile feelings. They were individualistic and non-conforming. In contrast, graduating women appeared to be more conventional, temperate, and modest. Studies by Chambers, Barger, and Lieberman (1965); Rose and Elton (1966); Dollar (1970); and Pandey (1973) report similar findings with both male and female subjects.

Astin's (1964) dropout subjects, who were tested with the California Psychological Inventory (Gough, 1957), were found to be aloof, to over-emphasize personal pleasure, to be self-centered, and to be assertive. Hanson and Taylor (1970) reported that the subjects of their study who persisted tended to show adequate family relationships but were under-socialized and uncomfortable in groups, while those who withdrew showed some family conflicts but enjoyed groups and were well-socialized.

Marsh (1966) has offered a description of the dropout that summarizes the findings of several research studies in his review of the attrition literature:

The dropout might be characterized as more rigid and fearful of change, less willing to accept responsibility of adult independence, lacking internalized goals and values, and somewhat of a social misfit. He also tends to be the type of person who feels easily, and perhaps hopelessly, defeated when faced with the prospect of possible failure or disappointment. In addition, he tends to rationalize his failings in an unrealistic manner (page 478).

Studies of the pathological tendencies of students as they relate to attrition are somewhat contradictory. At least one study (Pandy, 1973) casts doubts upon the



conclusion that college dropouts have more personality disturbances than those who succeed in school. Pandy found that few dignificant differences exist between good students and drop-outs on any of the MMPI scales, regardless of sex or race.

#### Satisfaction With the College Environment

During the decade of the 1960's--the period of student unrest on campuses across the nation--there was extensive concern and speculation among college administrators and student personnel workers. The need for research on college student satisfaction was readily apparent. A number of possible correlates of college student satisfaction have been investigated within recent years, including: type of residence and year in school (Betz, Klingensmith, and Menne, 1970); number of faculty with whom students were acquainted (Schmidt and Sedlacek, 1972); and student-college congruence (Pervin and Rubin, 1967).

Satisfaction with college has also been shown to be related to persistence of students. Starr and her associates (1972) postulated that

if an individual is to remain within the college environment, he must be fulfilling the requirements of that environment (performing satisfactorily) and the college environment must be meeting the needs of the student (leading to satisfaction) (page 318).

The results of the Starr study showed that scores on the College Student Satisfaction Questionnaire (Betz, Menne, and Klingensmith, 1970) differentiated between persisters and

non-persisters. Those who persisted were more highly satisfied with their environment than were dropouts. The study further indicated that students who had to drop out because of poor grades were less satisfied than persisters or non-academic dropouts.

Robinson (1969) also found dissatisfaction with advisement and scholastic habits among academic dropouts, but among those who persisted he found satisfaction with advisement and scholastic habits. Robinson believes that since students' evaluations of an institution's environmental factors were shown by his 1969 study to be helpful in predicting their future status in that institution, obtaining reports on student satisfaction may be an efficient way to identify potential dropouts for early counseling.

In Iffert's study (1958) the ratings of numerous facilities and services by students who remained to graduate indicated as much dissatisfaction as that expressed by the students who withdrew. Iffert inferred that students withdrew, possibly, because of an inability or unwillingness to endure dissatisfaction, rather than because of dissatisfaction.

#### Summary

The factors that are presented in the literature as possible causes of or conditions conducive to attrition are many and varied. There are indications that intellectual, psychological, and sociological forces can influence

persistence or withdrawal from college. In addition, the research supports the conclusion that the phenomenon of attrition is complex; that is, several factors may be simultaneously involved in a student's withdrawal.

## CHAPTER III

### DESIGN AND PROCEDURE

This investigation was concerned with a comparison of the attitudes and attributes of two groups of freshman students--persisters and non-persisters. In this chapter is presented the methodology of the study.

#### Design

The present study is an example of ex post facto research, as defined by Kerlinger (1964):

Ex post facto research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are not inherently manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables (page 379).

The writer recognizes that there are at least three major weaknesses of the ex post facto design: (1) the inability to manipulate independent variables, (2) the lack of power to randomize, and (3) the risk of improper interpretation (Kerlinger, 1964). Despite the weaknesses, however, much ex post facto research is done simply because many research problems in the social sciences do not lend themselves to experimental inquiry. Such is the case with the present study. Every effort has been made to minimize the undesirable

effects that the above mentioned characteristics might have on the validity of the results of this study.

### Subjects

Because of the nature of ex post facto design, it was impossible to assign the subjects to groups at random; hence, the subjects of this study comprise a non-probability sample. It was necessary to set certain limitations of the size of the sample to be selected for the study. The following criteria for an optimal sample presented by Parten (1966) were used in establishing these limitations:

The sample should be small enough to avoid unnecessary expense and large enough to avoid intolerable sample error. It should be large enough to yield statistically representative and significant results in all the proposed tabulations of importance; but not so large as to waste funds, retard the project, and achieve needlessly high precision. The sample should yield the desired information with required reliability at the minimum cost.... In addition, it should be possible in some instances to expand or contract the sample size to meet unforeseen developments during the course of the survey (page 293).

With these criteria in mind, students who were enrolled in the freshman orientation classes of the College of Arts and Sciences at Oklahoma State University were asked to participate in the study. The college administrators requested that 450 students who were being tested by another investigator be excluded from this study. It was believed that no more of those students' class discussion time could be devoted to participation in a research project than had already been scheduled by the former investigator.

Therefore, the writer had permission to survey the 1026 remaining freshman students enrolled in orientation classes.

Only students who were first-time entering freshmen in the fall semester of 1973 were included in the final group of subjects. Those students who, prior to the beginning of the fall semester 1974 were suspended or expelled from the University for disciplinary reasons were eliminated from this study, as their reasons for terminating their college careers may not have been related to the variables being studied.

Of the 919 students from whom information was received, 105 had to be eliminated from the study because they did not meet all of the criteria established for the subjects. As indicated in Table I, there were 814 subjects in the final group.

TABLE I  
ELIMINATION OF SUBJECTS FROM THE STUDY

Category	Number
Total Number of Respondents	919
Eliminations	
Incomplete Questionnaire	18
Returning Students	29
Students Expelled for Disciplinary Reasons	0
Special Students	0
No Identification Information	58
	<u>105</u>
Subjects in the Final Group	814

## The Instrument

The instrument used to survey the subjects was a questionnaire developed by the investigator to (1) obtain certain biographical information and (2) elicit responses pertaining to the degree of satisfaction felt for various aspects of the college experience. Validation for the use of a questionnaire is given by Good (1959):

The questionnaire extends the investigator's powers and techniques of observation by . . . helping insure responses to the same item from all respondents, and tending to standardize and objectify the observations of different enumerators (by singling out particular aspects of the situation and by specifying units and terminology for describing the observations) (page 191).

Part I of the questionnaire was concerned with (1) the age of the respondents, (2) type of housing, (3) hours per week devoted to study, (4) fraternity membership, (5) leadership positions held, (6) extracurricular involvements, and (7) hours per week spent at work. Part II of the instrument consisted of 81 items taken from the College Student Satisfaction Questionnaire (Form B, 1969 Revision) developed by Betz, Menne, and Klingensmith (1970). Eleven items of the 92 items originally included in the Form B were eliminated by this investigator for the sake of brevity. One original item concerning satisfaction with the Division of Student Affairs was added by the investigator at the request of that division.

Development of the College Student  
Satisfaction Questionnaire (CSSQ)

The College Student Satisfaction Questionnaire (CSSQ) was designed to measure college student satisfaction as an analogue to job satisfaction. The six dimensions of college student satisfaction were selected on the basis of job satisfaction research regarding components of satisfaction (e.g., Herzberg, et al., 1957) and also considering possible additional variables unique to the college setting. These six dimensions, as discussed by Betz and her associates (1970) are: (a) Policies and Procedures, (b) Working Conditions, (c) Compensation, (d) Quality of Education, (e) Social Life, and (f) Recognition.

The first CSSQ developed by Betz et al. consisted of 139 items. After the initial administration of the instrument to 643 subjects and analysis of the resulting data, a 92-item revised form was developed

Development of the Student  
Satisfaction Questionnaire (SSQ)

The second portion of the instrument used in the present study consisted of 81 items taken directly from the CSSQ (with permission of the authors) and one original item added by the writer. A Likert-type scale was utilized on which the respondents indicated one of the following responses for each statement: very satisfactory, somewhat satisfactory, rather satisfactory, very unsatisfactory, no opinion or does not



apply. An example of the statements is: "The chance for men and women to get acquainted."

A numerical value of five was given when the most favorable response (or very satisfactory) was indicated by the subjects, four for "somewhat satisfactory," three for "rather unsatisfactory," two for "very unsatisfactory," and one for "no opinion or does not apply." The sum of the numbered values represented the scores of each respondent on the SSQ.

The instrument (including parts I and II) was given to four specialists in the fields of higher education, student personnel and guidance, institutional research, and academic concerns, who were asked to evaluate it in terms of length, clarity of instruction, convenience in marking responses, and other characteristics that would encourage respondents to complete the questionnaire. Based on the recommendations of those specialists, modifications were made, resulting in the final form of the questionnaire which was submitted to the respondents (See Appendix).

### Validity

In an effort to establish the validity of the instrument, scores on item 89 of the SSQ (see Appendix) were compared with total scores to ascertain whether the high scores on the SSQ actually reflect high satisfaction. It was assumed that if a student indicated in item 89 that he was very satisfied with life at Oklahoma State University, he would have a high satisfaction score. Conversely, if a

student indicated in item 89 that he found life at Oklahoma State University very unsatisfactory he would have a low satisfaction score. The Pearson  $r$  was used in this test of validity. A correlation of .5005 indicated a correlation significant at the .0001 level of confidence.

Construct validity of the instrument was also evaluated. According to Thorndike and Hagan (1969, page 177):

For any test that presumes to measure a trait or quality, we can formulate a network of theory, leading to definite predictions. These predictions can be tested. Insofar as they are born out, the validity of the test as a measure of the trait or construct is supported. Insofar as the predictions fail to be verified, we are led to doubt the validity of our test, or our theorizing, or both.

In the development of the College Student Satisfaction Questionnaire Starr, Betz, and Menne (1972) considered selected theoretical propositions by Dawis and his associates (1968) as they applied to the college student and his environment: "The probability of an individual voluntarily leaving the work environment is inversely related to his satisfaction" (Dawis, et al., 1968, page 11). From this proposition, it was predicted by Starr, Betz, and Menne (1972) that students who remain in college would be more satisfied than students who drop out.

The present investigator made the same prediction for the subjects of this study. An F test was used to determine if there were statistically significant differences between persisters and non-persisters in terms of satisfaction scores. As shown in Table II, an F score of .640 was obtained, indicating that persisters did not score

significantly higher than non-persisters. Thus the proposition that the greater the degree of satisfaction a student expresses, the less likely he is to leave college, was not supported by the findings of the present study. Furthermore, the construct validity of the SSQ (part II) as a measure of satisfaction was not supported by this particular test.

TABLE II  
THE EFFECT OF SATISFACTION ON PERSISTENCE

Source	SS	df	MS	F
Persistence	770.695	1	770.694	.640
Residual	977660.422	812	1205.015	
Corrected Total	978431.117	813	1203.482	

Probability > F .5704

It may be, as Bechtoldt (1959) stated, that logical precision is lacking in procedures thus far evolved for determining construct validity. There remain too many vaguely defined variables in these procedures to allow easy extrapolation to operationally identifiable concepts. Possibly as Thorndike and Hagan (1969) indicated, we should doubt the validity of the theorizing in this instance.

Allpart (1931), in his discussion of traits, indicated that acts or habits that are inconsistent with a trait are not proof of the non-existence of the trait. Likewise, this researcher proposes that the fact that satisfaction scores are not significantly related to persistence does not necessarily mean that satisfaction is not being measured by the Student Satisfaction Questionnaire, particularly in light of the fact that the pragmatically determined empirical validity was found to be highly significant.

### Reliability

To test for internal consistency of Part II of the SSQ, the chi square test was used in an item analysis to determine which items significantly differentiated those subjects scoring in the upper quarter and those subjects scoring in the lower quarter on the basis of total scores. Items 8 through 88 were found to be significantly discriminating at the .0001 level of confidence.

A split-half reliability coefficient, computed with the Spearman-Brown correction formula, of .9468 was obtained in determining an index of the reliability of the items in the Student Satisfaction Questionnaire (Part II).

### Collection of Data From the Questionnaire

The following is an outline of the procedures that were used in the collection of the data from the subjects:

1. A conference was held with the Director of Arts and Sciences Student Services to explain the proposed study and the procedures for collection of the data from the subjects. Permission to administer the questionnaire during one class period of the orientation classes was given by the Director.

2. A meeting was held with the coordinator of the orientation program to discuss procedures for collecting the data. The coordinator was asked to serve as the liaison between this investigator and the student discussion leaders who would actually administer the questionnaire.

3. At the regular weekly meeting of the coordinator and the student discussion leaders of the various sections of the orientation course, the study was briefly described and instructions for the administration of the instrument were given.

4. Just prior to the class time at which the instrument was to be administered, the student leaders were given packets containing the SSQ, answer cards, and pencils for the number of students in their respective sections.

5. At the class meetings, the subjects were asked to complete the questionnaire. To guard against invalid responses due to a misunderstanding on the part of the subjects, the student leaders read aloud the standardized instructions printed at the beginning of the questionnaire.

6. All questionnaires were returned to the office of the Director of Arts and Sciences Student Services where they were collected by the investigator.

The data were collected from the subjects from September 19 through 26, 1973 (at one class period of each section meeting during that week). Time required for the completion of the questionnaire varied with the individual respondents from approximately twenty to thirty-five minutes.

#### Collection of Biographical and Academic Data

One of the concerns of the investigator was that the subjects be free to respond to the questionnaire without fear of recourse on the part of their instructors or others should their responses be negative. Therefore, the subjects were told that they need not put their names on their answer cards. However, in order that the questionnaire responses might be matched with the available biographical data, respondents were asked to indicate their student identification numbers on their answer cards. The investigator believed that the identification of responses by number offered a greater feeling of anonymity for the subjects than identification of responses by name.

The identification numbers of respondents were then used to determine the students' names from a computer print-out listing all students in numerical order of their identification numbers. Finally, the enrollment information cards (filed by name only) and a student listing arranged alphabetically by names were secured to obtain the biographical data necessary for this study. All information remained confidential to the investigator and no individuals were identified in the study.

From the various sources discussed above, the following information about each subject was obtained: (a) high school grade point average, (b) high school rank in class (quarter), (c) ethnic group, (d) major, (e) marital status, (f) sex, (g) ACT cululative score, (h) credit hours in which the subject was enrolled at the time he responded to the questionnaire. Table III indicates the coding used for each variable.

It was necessary to wait to collect the information regarding persistence until at least two weeks after the beginning of the 1974 fall semester, the deadline set by the University for the completion of enrollment for that semester. Persistence into the second year was determined simply by examining the Bursar's fee payment list to ascertain whether the student was billed for total fees on the last date for enrollment for the fall semester. If the subject were listed on the billing list, he was enrolled for classes on the final date for enrollment and was considered a persister. Conversely, if he were not listed, he was not enrolled, and was categorized as a non-persister.

#### Analysis of the Data

Several statistical techniques were used to analyze the data. Tabulations and percentages were used to summarize the data describing the two groups of subjects. The non-parametric chi square, and the parametric F test were used to test the hypotheses.

TABLE III  
CLASSIFICATION OF BIOGRAPHICAL DATA

Variables	Classification
Age	A. Under 18 B. 18 C. 19 D. 20 E. Over 20
Type of residence	A. At home with parents B. Residence Hall C. Sorority or Fraternity house D. Your own house or apartment or other residence
Hours per week devoted to study	A. Fewer than 12 B. 12-23 C. 24-35 D. 36-47 E. 48 or more
Fraternity or sorority membership	A. Yes B. No
Number of leadership positions	A. None B. One C. Two or more
Number of extra-curricular organizations (excluding living group)	A. None B. One C. Two or more
Number of hours per week spent working	A. None B. 10 or fewer C. 11-20 D. 21-30 E. 31-40
Sex	A. Female B. Male
Marital status	A. Married B. Single C. Divorced D. Widowed



TABLE III (Continued)

Variables	Classification
Ethnic group	A. Negro B. Oriental C. American Indian D. Spanish American E. All Others
ACT score (composite)	A. 18 - below B. 19-21 C. 22-25 D. 26-29 E. 30 - above
Total credit hours (at the time of the survey)	A. 12-14 B. 15-16 C. 17-18 D. 19 - over
Rank	A. 1st quartile (highest) B. 2nd quartile C. 3rd quartile D. 4th quartile
High School grade point average	A. 3.6 - 4.0 B. 3.1 - 3.59 C. 2.6 - 3.09 D. 2.0 - 2.59 E. Below 2.0
Persistence	A. Returned for second year B. Did not return for second year
Major	A. Declared B. Undeclared

According to Runyan and Haber (1967), when large samples are employed, the parametric tests are almost always appropriate because of the Law of Large Numbers: "If random samples of a fixed  $N$  are drawn from any population (regardless of the form of the population distribution), as  $N$  becomes larger, the distribution of the sample mean approaches normality" (page 144). Therefore, given (1) as a general rule, the parametric tests are more powerful than their non-parametric counterparts, and (2) the size of the sample in the present study is quite large, it was determined that the parametric tests should be employed. It was assumed that the proportion of error introduced in the data by utilizing a parametric test on ordinal level data would be of such minor importance that the conclusions would not be affected.

The chi square, a commonly used technique for analyzing data in the social sciences, was employed to test the hypotheses under investigation when the data to be examined were at the nominal level. An F test was employed whenever the data to be examined were at the ordinal or interval level. For the purposes of this investigation, the .05 level of probability was used to determine the significance of all statistical tests. The results of the analyses are presented in Chapter IV.

## CHAPTER IV

### ANALYSIS OF THE DATA

The primary purpose of the present study was to determine if there were significant differences between persisters and non-persisters in terms of selected biographical, academic, and psycho-social factors.

The results of the statistical analysis of the data are presented in this chapter. A brief profile of the subjects is followed by the examination of the hypotheses and discussion of the results of the statistical tests.

#### Description of the Subjects

Of the 814 subjects in the study, 76.5 per cent persisted to enroll for their second year of college, while 23.5 per cent became non-persisters. These findings support those of Iffert's national study (1958), in which it was reported that 273 per 1000 students left school within the first year of college, the most critical drop-out period. (He reported for comparison that 283 per 1000 left during the next three years combined.) The results of the present study are also comparable to those of Demitroff (1974), who reported in another institutional study that 20 per cent of the subjects did not return for their second year.

The greatest percentage of the 402 female and 412 male subjects indicated that they were 18 years old, single, and non-members of the four ethnic groups listed. While most of them lived in residence halls, 10 per cent did indicate membership in a social sorority or fraternity. (Freshman pledges of the sorority system at Oklahoma State University often live in residence halls due to limited space in many of the sorority houses.) Though students responded to the questionnaire during only the third week of school, 28 per cent of them were already involved in two or more campus activities, but few had been elected to leadership positions. Less than 20 per cent of the total number of subjects devoted part of their time outside of class to earning money for college expenses.

Academically, the students were slightly above average. Forty-three per cent of the students ranked in the highest quarter of their respective high school classes, and 22 per cent had ACT composite standard scores of 26 or higher. (According to the American College Testing Program, Incorporated (1970) a composite standard score of 26 is the equivalent of an 89 percentile rank among college bound high school students.) More than one-half of the subjects had high school grade point averages of 3.1 or higher; the modal grade point average was 3.1 - 3.5.

Students indicated that they were enrolled in 15 to 16 hours, for the most part, but most of them spent only 12 to 23 hours per week studying. A slightly greater percentage

of the subjects had chosen a major field of study than indicated they were undecided about their major.

A detailed description of the 814 students who served as subjects of the study is presented in Table IV.

### Satisfaction Scores

The Student Satisfaction Questionnaire was used to determine the satisfaction with college life which the subjects felt at the time of the survey. The satisfaction scores ranged from 89 to 301, with a mean of 169.7678 and a standard deviation of 34.69 (see Table V). The mean satisfaction scores of the subjects grouped according to variable classification are also given in Table V. These means, which will be useful in the interpretation of the tests for significance, will be referred to throughout the discussion of the hypotheses.

## Examination of the Hypotheses and

### Discussion of the Results

#### Hypothesis I(a). There is no Significant Difference Between Persisters and Non-persisters With Regard to Grade Point Averages From High School

Table VI shows the statistical differences between the high school grade point averages of persisters and non-persisters. At the .05 level of confidence with five degrees of freedom, the required chi square is 11.07 or more. The obtained chi square was 35.63, indicating that the difference

TABLE IV  
CHARACTERISTICS OF THE SUBJECTS

Variables	Classification	No.	%
Age	A. Under 18	111	13.7
	B. 18	652	80.2
	C. 19	37	4.5
	D. 20	4	.5
	E. Over 20	9	1.1
Residence	A. At home with parents	33	4.1
	B. Residence Hall	668	82.0
	C. Fraternity House	83	10.2
	D. Own house, apartment, other	30	3.7
Hours per week devoted to study	A. Fewer than 12	269	33.0
	B. 12-23	429	52.7
	C. 24-35	101	12.4
	D. 36-47	12	1.5
	E. 48 or more	3	.4
Fraternity or sorority membership	A. Yes	149	18.3
	B. No	664	81.7
Number of leadership positions	A. None	662	81.5
	B. 1	128	15.8
	C. 2	22	2.7
Number of extra-curricular organizations (exclud- ing living group)	A. None	348	42.8
	B. One	235	28.9
	C. Two or more	231	28.3
Number of hours per week spent working	A. None	667	82.1
	B. 10 or fewer	52	6.4
	C. 11-20	75	9.2
	D. 21-30	16	1.9
	E. 31-40	3	.4
Sex	A. Female	402	49.4
	B. Male	412	50.6
Marital status	A. Married	16	2.0
	B. Single	794	97.8
	C. Divorced	2	.2
	D. Widowed	0	0

TABLE IV (Continued)

Variables	Classification	No.	%
Ethnic Group	A. Negro	11	1.4
	B. Oriental	7	.9
	C. American Indian	18	2.2
	D. Spanish American	3	.3
	E. All Others	773	95.2
ACT score (composite)	A. 18-below	215	26.7
	B. 19-21	166	20.6
	C. 22-25	244	30.3
	D. 26-29	163	20.2
	E. 30-above	18	2.2
Total credit hours (at the time of the survey)	A. 12-14	252	31.3
	B. 15-16	476	59.1
	C. 17-18	74	9.2
	D. 19-over	3	.4
Rank in high school class	A. 1st quartile	358	50.5
	B. 2nd quartile	212	30.0
	C. 3rd quartile	106	14.9
	D. 4th quartile	33	4.6
High school grade point average	A. 3.6-4.0	187	23.5
	B. 3.1-3.5	253	31.7
	C. 2.6-3.0	213	26.7
	D. 2.0-2.5	122	15.3
	E. Below 2.0	22	2.8
Major	A. Declared	413	51.7
	B. Undeclared	386	48.3

TABLE V  
 MEAN SATISFACTION SCORES AND STANDARD DEVIATIONS FOR  
 SUBJECTS GROUPED BY VARIABLE CLASSIFICATIONS

Variable	Classification	N	M	SD
Total Population		814	169.7678	34.6912
High School GPA	A. 3.6-4.0	187	167.2406	35.8920
	B. 3.1-3.59	253	172.0079	33.4026
	C. 2.6-3.09	213	169.2441	35.0822
	D. 2.0-2.59	122	170.8524	35.6217
	E. Below 2.0	22	175.0909	37.0005
	Overall	<u>797</u>	<u>170.0589</u>	
High School Rank	A. First Quarter	358	168.6927	34.4436
	B. 2nd Quarter	212	171.1273	35.6955
	C. 3rd Quarter	106	170.9245	34.6222
	D. Fourth Quarter	33	173.2424	38.4521
	Overall	<u>709</u>	<u>169.9661</u>	
ACT Composite Standard Score	A. 18-Below	215	167.3348	32.9843
	B. 19-21	166	165.9337	31.8567
	C. 22-25	244	172.7827	36.5810
	D. 26-29	163	172.8220	37.1237
	E. 30-Above	18	158.9444	29.2121
	Overall	<u>806</u>	<u>169.6178</u>	
Credit Hours	A. 12-14	252	171.4524	35.6056
	B. 15-16	476	169.3655	34.9199
	C. 17-18	74	166.1622	31.2901
	D. 19-Over	3	177.6667	14.8436
	Overall	<u>805</u>	<u>169.7552</u>	
Hours Devoted to Study	A. Fewer than 12	269	174.9330	36.0393
	B. 12-23	429	165.9790	32.6764
	C. 24-35	101	172.2277	36.0152
	D. 36-47	12	183.2500	39.3264
	E. 48 or MOre	3	111.6667	13.6504
	Overall	<u>814</u>	<u>169.7678</u>	
Extra-Curricular Activities	A. None	348	174.8275	36.2992
	B. One	235	170.4383	32.9714
	C. Two or More	231	161.4632	32.4293
	Overall	<u>814</u>	<u>169.7678</u>	
Fraternity/Sorority Membership	A. Yes	149	161.1342	30.1816
	B. No	664	171.7756	35.3317
	Overall	<u>813</u>	<u>169.8253</u>	



TABLE V (Continued)

Variable	Classification	N	M	SD
Leadership Positions	A. None	662	170.1601	34.8420
	B. One	128	169.1796	34.0817
	C. Two or More	<u>22</u>	<u>157.0000</u>	29.1024
	Overall	812	169.6490	
Type of Residence	A. At home w/parents	33	179.0303	30.1512
	B. Residence Hall	668	168.3098	34.4160
	C. Sorority-Fraternity House	83	168.9638	36.9054
	D. Own home or apartment	<u>30</u>	<u>194.2666</u>	29.5424
	Overall	814	169.7678	
Number of Hours Devoted to Self-Support	A. None	667	168.9220	34.8350
	B. 10 or fewer	52	170.8846	33.4357
	C. 11-20	75	172.9733	34.1586
	D. 21-30	16	176.8750	31.7886
	E. 31-40	<u>3</u>	<u>223.0000</u>	23.0000
	Overall	813	169.7774	
Age	A. Under 18	111	166.1891	34.3975
	B. 18	652	169.8834	34.7698
	C. 19	37	172.8648	36.4898
	D. 20	4	192.2500	27.3176
	E. Over 20	<u>9</u>	<u>182.5555</u>	26.9310
	Overall	813	169.7651	
Sex	A. Female	402	165.5920	32.7017
	B. Male	<u>412</u>	<u>173.8422</u>	36.1044
	Overall	814	169.7678	
Marital Status	A. Married	16	172.2500	48.5544
	B. Single	794	169.7279	34.3522
	C. Divorced	<u>2</u>	<u>131.5000</u>	31.8198
	Overall	812	169.6835	
Ethnic Group	A. Black	11	183.1818	41.8086
	B. Oriental	7	156.7143	43.2231
	C. American Indian	18	170.2222	32.6470
	D. Spanish American	3	141.3333	15.6950
	E. All Others	<u>773</u>	<u>169.6714</u>	34.5371
	Overall	812	169.6502	
Major Field	A. Declared	413	169.9177	35.7642
	B. Undeclared	<u>386</u>	<u>169.0026</u>	33.4597
	Overall	799	169.4756	

between the grade point averages from high school of persisters and non-persisters was significant at the .001 level of confidence.

These findings support those of other studies (e.g., Summerskill, 1962; Astin, 1972) which have also reported that grade point average from high school is significantly related to persistence in college.

TABLE VI

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
WITH RESPECT TO HIGH SCHOOL GRADE POINT AVERAGE

Grade Point Average	Persisters		Non-Persisters		X <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	12	13.01	5	3.99	35.63
3.6-4.0	160	143.12	27	43.88	
3.1-3.59	203	193.64	50	59.36	
2.6-3.09	163	163.02	50	49.98	
2.0-2.59	71	93.37	51	28.63	
Below 2.0	14	16.84	8	5.16	

Probability > X<sup>2</sup> .0001

Hypothesis I(b). There is no Significant Difference Between Persisters and Non-persisters With Regard to High School Rank in Class

The statistical relationship between persisters and non-persisters classified according to high school rank in class is shown in Table VII. A chi square was calculated to ascertain the significance of the difference between the two groups. The critical ratio for significance of difference at the .05 level of confidence with four degrees of freedom is 9.49. Since the computed chi square of 25.95 was larger than that required for significance, it can be said that there was a significant difference between the groups with respect to high school rank in class (level of significance = .0001).

Hypothesis I(c). There is no Significant Difference Between Persisters and Non-persisters With Regard to ACT Composite Standard Scores

When the ACT composite standard scores of persisters and non-persisters were compared, it was found that persisters had significantly higher scores than did non-persisters. As Table VIII indicates, the chi square obtained to determine the significance of the difference between the two groups was 23.53. The obtained chi square is considerably above 11.07, or the value required for significance with five degrees of freedom.

TABLE VII

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
WITH RESPECT TO HIGH SCHOOL RANK IN CLASS

Rank in Class	Persisters		Non-persisters		X <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	79	80.36	26	24.64	25.95
First Quarter (high)	298	274.00	60	84.00	
Second Quarter	159	162.26	53	49.74	
Third Quarter	69	81.13	37	24.87	
Fourth Quarter	18	25.26	15	7.74	
Totals	623	623.00	191	191.00	(N=814)

Probability > X<sup>2</sup> .0001

TABLE VIII

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
WITH RESPECT TO ACT STANDARD COMPOSITE SCORES

ACT Score	Persisters		Non-persisters		x <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	4	6.12	4	1.88	23.53
18 - Below	149	164.55	66	50.45	
19 - 21	123	127.05	43	38.95	
22 - 25	189	186.75	55	57.25	
26 - 29	140	124.75	23	38.25	
30 - Above	18	13.78	0	4.22	
Totals	623	623.00	191	191.00	(N=814)
Probability > x <sup>2</sup> .0003					

As in the case of Astin's study (1972), persistence increased consistently as ACT scores rose. For example, while only 149 (69 per cent) of the 215 subjects scoring 18 or below on the ACT persisted to their second year of school, all of the 18 subjects scoring 30 or above persisted.

Hypothesis I(d). There is no Significant Difference Between Persisters and Non-persisters With Regard to the Number of Credit Hours in Which Enrolled

When this hypothesis was subjected to the chi square test, a significant difference was found between persisters and non-persisters with regard to the number of hours in which they were enrolled at the time they responded to the SSQ. As Table IX indicates, the obtained chi square is 14.03, which is significant at the .007 level with four degrees of freedom.

The busier the students were in terms of class hours, the more likely they were to remain in school. For instance, 173 (or 69 per cent) of the 252 students enrolled in 12 to 14 hours persisted, while 82 per cent (378 of 476) of those enrolled in 15 to 16 hours persisted. It may be that this phenomenon does not operate independently, but rather is related to the student's (and/or the student's advisor's perception of his) academic ability. The student who did not enter college with a strong academic background, as measured by high school grades and college entrance examination scores, may have been advised to enroll in fewer

than the student with outstanding grade and exam records. Since the student with lower ability is predictably less likely to persist, it follows that the student enrolled in fewer class hours may also be less likely to persist as a result of a prejudgement and calculated assignment of lighter course load.

TABLE IX  
THE RELATIONSHIP BETWEEN PERSISTERS AND  
NON-PERSISTERS WITH RESPECT TO NUMBER  
OF CREDIT HOURS IN WHICH ENROLLED

Credit Hours	Persisters		Non-persisters		X <sup>2</sup>
	Observed Fre. quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	8	6.89	1	2.11	14.03
12-14	173	192.87	79	59.13	
15-16	378	364.31	98	111.69	
17-18	61	56.64	13	17.36	
19-Over	3	2.30	0	.70	
Totals	623	623.00	191	191.00	(N=814)

Probability > X<sup>2</sup> .0073

Hypothesis I(e). There is no Significant Difference Between Persisters and Non-persisters With Regard to the Number of Hours Devoted to Study

In examining this hypothesis, the chi square test for significance was again used. As Table X indicates, there is a significant difference between persisters and non-persisters classified according to the number of hours per week devoted to study. The obtained chi square of 11.87 is significant at the .01 level of confidence with four degrees of freedom.

TABLE X

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO NUMBER OF HOURS PER WEEK DEVOTED TO STUDYING

Number of Hours Devoted to Study	Persisters		Non-persisters		x <sup>2</sup>
	Observed Frequency	Expected Frequency	Observed Frequency	Expected Frequency	
Fewer than 12	192	205.88	77	73.12	11.87
12-23	335	328.34	94	100.66	
24-35	86	77.30	15	23.70	
36-47	9	9.18	3	2.82	
48 or More	1	2.30	2	.70	
Totals	623	623.00	623	623.00	(N=814)

Probability > x<sup>2</sup> .0183



The greatest percentage of persistence was in the 24 to 35 hour group. Those who spent 48 or more hours studying had the lowest persistence rate, and those who studied fewer than 12 hours per week had the next lowest percentage of persistence. It would seem that studying either too much or too little can have a negative effect on a student's persistence. (Caution should be exercised, however, in the interpretation of data from only three subjects, as in the "48 or more" category).

Hypothesis I(f). There is no Significant Difference Between Persisters and Non-persisters With Regard to Participation in Extra-curricular Activities

In order to determine if there were a significant difference between persisters and non-persisters classified according to their participation in extra-curricular activities, the chi square test was applied. A chi square of 11.47 was obtained, indicating that the difference was significant at the .003 level of confidence with two degrees of freedom. (See Table XI).

The findings of the present study contradict those reported by Iffert (1958) in his national study of students' withdrawal patterns. Neither the type of activity nor the amount of time devoted to the extra-curricular activities during the first registration period was related to the length of attendance in college of his subjects. Yet, in the present study, the more active the students were, the

more likely they were to remain in school. As an illustration, while 82 per cent of those who were involved in two or more activities persisted, only 70 per cent of those who participated in no activities persisted.

TABLE XI  
THE RELATIONSHIP BETWEEN PERSISTERS AND  
NON-PERSISTERS WITH RESPECT TO  
PARTICIPATION IN EXTRA-  
CURRICULAR ACTIVITIES

Number of Extra- curricular Activities	<u>Persisters</u>		<u>Non-persisters</u>		$\chi^2$
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
None	247	266.34	101	81.66	11.47
One	185	179.86	50	55.14	
Two or More	191	176.80	40	54.20	
Totals	623	623.00	191	191.00	(N=814)

Probability >  $\chi^2$  .0034

Hypothesis I(g). There is no Significant Difference  
Between Persisters and Non-persisters With Regard to  
Membership in a Sorority or Fraternity

A chi square test was again utilized to examine the significance of the difference between persisters and

non-persisters classified according to membership in a sorority or fraternity. The results of the chi square calculation was 9.28, as can be seen in Table XII. The critical ratio at two degrees of freedom is 5.99 at the .05 confidence level. Since the computed chi square was greater than the critical ratio, there was a significant difference between the groups.

TABLE XII

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO SORORITY OR FRATERNITY MEMBERSHIP

Fraternity/ Sorority Membership	Persisters		Non-persisters		X <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	1	.77	0.000	.23	9.28
Member	128	114.04	21	34.96	
Non-Member	494	508.20	170	155.80	
Totals	623	623.00	191	191.00	(N=814)
Probability > X <sup>2</sup> .0097					

In this study 85 per cent of those who indicated that they were members of a Greek social fraternity or sorority persisted to the second year of college; 74 per cent of the non-Greek group persisted. The present study supports the

findings of studies by both Iffert (1958) and Willingham (1962) who found that fraternity members had significantly higher persistence rates than non-fraternity members.

Hypothesis I(h). There is no Significant Difference Between Persisters and Non-persisters With Regard to the Number of Leadership Positions Assumed

When this hypothesis was subjected to a chi square for significance, no significant difference was found between persisters and non-persisters classified according to number of leadership positions which they held at the time of the survey. There was a slight tendency, however, for those students who were involved in one extra-curricular activity to persist in greater number than those who were not involved in any activity or those who were involved in two or more activities very early in the year.

The results of the test for significance can be seen in Table XIII. The obtained chi square of 2.58 is significant only at the .4638 level.

Hypothesis I(i). There is no Significant Difference Between Persisters and Non-persisters With Regard to Type of Residence

Table XIV shows the statistical difference between persisters and non-persisters classified according to type of residence. As can be seen from the table, there was no significant difference, as the obtained chi square was less

TABLE XIII

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
WITH RESPECT TO NUMBER OF LEADERSHIP POSITIONS

Number of Positions	<u>Persisters</u>		<u>Non-persisters</u>		x <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	2	1.53	0	.47	2.58
None	500	506.67	162	155.33	
One	104	97.97	24	30.03	
Two or More	17	16.84	5	5.16	
Totals	623	623.00	191	191.00	(N=814)
Probability > x <sup>2</sup> .4638					

than 7.82, the critical ratio for three degrees of freedom at the .05 confidence level. It might be noted, however, that the highest percentage of persistence was in the group that lived at home with parents, while the lowest persistence rate was among those who lived in their own apartments or houses or other residences.

TABLE XIV

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
WITH RESPECT TO TYPE OF RESIDENCE

Type of Residence	Persisters		Non-persisters		X <sup>2</sup>
	Observed Frequency	Expected Frequency	Observed Frequency	Expected Frequency	
With parents	26	25.26	7	7.74	4.87
Residence Hall	516	511.26	152	156.74	
Sorority/ Fraternity House	63	63.52	20	19.48	
Own house, apartment, other	18	22.96	12	7.04	
Totals	623	623.00	191	191.00	(N=814)
Probability > X <sup>2</sup> .1801					

Hypothesis I(j). There is no Significant Difference Between Persisters and Non-persisters With Regard to Hours Devoted to Self-support per Week

In examining this hypothesis, the chi square test for significance was again used. The results of the calculation of the chi square can be seen in Table XV. The obtained score was less than 11.07, the critical ratio at the .05 confidence level with five degrees of freedom. Hence, there was no significant difference between the two group classified according to hours devoted to self-support per week.

TABLE XV

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO NUMBER OF HOURS DEVOTED TO SELF-SUPPORT PER WEEK

Number of Hours of Work	Persisters		Non-Persisters		$\chi^2$
	Observed Frequency	Expected Frequency	Observed Frequency	Expected Frequency	
Blank	0	.77	1	.23	6.21
None	511	510.49	156	156.51	
10 or fewer	39	39.80	13	12.20	
11-20	61	57.40	14	17.60	
21-30	10	12.25	6	3.75	
31-40	2	2.30	1	.70	
Totals	623	623.00	191	191.00	(N=814)

Probability  $> \chi^2$  .2855

Hypothesis I(k). There is no Significant Difference Between Persisters and Non-persisters With Regard to Age

Comparison of the two groups with regard to age is shown in Table XVI. The chi square score must be equal to or greater than 11.07 at the .05 level of significance with five degrees of freedom. Since the obtained chi square score was less than that required, the difference between the groups was not significant.

TABLE XVI  
THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO AGE

Age	<u>Persisters</u>		<u>Non-persisters</u>		x <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	1	.77	0	.23	7.40
Under 18	88	84.95	23	26.05	
18	503	499.01	149	152.99	
19	22	28.32	15	8.68	
20	3	3.06	1	.94	
Over 20	6	6.89	3	2.11	
Totals	623	623.00	191	191.00	(N=814)

Probability > x<sup>2</sup> .1907



It is noted that the group who indicated that they were younger than 18 years had the highest persistence rate (79 per cent), while those who were 19 years old had the lowest persistence rate (59 per cent). Summerskill (1962) found that the general conclusion to be drawn from the literature is that the age per se does not affect attrition, although older undergrads may encounter more obstacles to graduation. The present study would seem to support the findings of those studies which Summerskill surveyed.

Hypothesis I(1). There is no Significant Difference Between Persisters and Non-persisters With Regard to Sex

The statistical difference between the groups with respect to gender is shown in Table XVII. As indicated below, the chi square obtained was .51, which is less than the critical ratio of 3.84 with one degree of freedom at the .05 confidence level. Thus, there was not a significant difference between the persistence of males and females.

Astin (1972) also found this to be true among students of four year colleges. In his national study, 78 per cent of the men and 77 per cent of the women returned for their second year. In the present study, however, the trend was reversed, with 77 per cent of the women and 75 per cent of the men returning for their second year of college.

TABLE XVII  
 THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
 WITH RESPECT TO SEX

Sex	<u>Persisters</u>		<u>Non-persisters</u>		$\chi^2$
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Female	312	307.67	90	94.33	.51
Male	311	315.33	101	96.67	
Totals	623	623.00	191	191.00	(N=814)
Probability > $\chi^2$ .4811					

Hypothesis I(m). There is no Significant Difference Between Persisters and Non-persisters With Regard to Marital Status

In order to determine the statistical difference between the two groups in terms of marital status, a chi square test was applied to the data. The critical ratio at the .05 level of confidence with three degrees of freedom is 7.82. Since the computed chi square of 1.25 was less than the critical ratio, there was no significant difference between the two groups when compared according to marital status (See Table XVIII).

TABLE XVIII

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO MARITAL STATUS

Marital Status	<u>Persisters</u>		<u>Non-persisters</u>		X <sup>2</sup>
	Observed Frequency	Expected Frequency	Observed Frequency	Expected Frequency	
Blank	2	1.53	0	.47	1.25
Married	12	12.25	4	3.75	
Single	607	607.69	187	186.31	
Divorced	2	1.53	0	.47	
Widowed	0	0	0	0	
Totals	623	623.00	191	191.00	(N=814)

Probability > X<sup>2</sup> .7445

Hypothesis I(n). There is no Significant Difference Between Persisters and Non-persisters With Regard to Ethnic Group

The statistical relationship between persisters and non-persisters classified according to ethnic group is shown in Table XIX. The chi square calculated for the significance of the difference between the group was 3.18. The critical ratio for significance of difference at the .05 level of confidence with five degrees of freedom is 11.07. Since the computed chi square is considerably less than the latter figure, there was no significant difference between the groups.

TABLE XIX

CONTINGENCY TABLE SHOWING THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS WITH RESPECT TO ETHNIC GROUP

Ethnic Group	Persisters		Non-persisters		X <sup>2</sup>
	Observed Fre- quency	Expected Fre- quency	Observed Fre- quency	Expected Fre- quency	
Blank	1	1.53	1	.47	3.18
Negro	7	8.42	4	2.58	
Oriental	5	5.36	2	1.64	
American Indian	12	13.78	6	4.22	
Spanish American	2	2.30	1	.70	
All Others	596	591.62	177	181.38	
Totals	623	623.00	191	191.00	(N=814)

Probability > X<sup>2</sup> .6745

Hypothesis I(o). There is no Significant Difference  
Between Persisters and Non-persisters With Regard to  
Choice of Major Field

As can be seen in Table XX, students who indicated that they had chosen a major field of study were no more likely to persist to their second year of college than those who indicated that they were undecided about a major. A chi square of 4.71 was computed to ascertain whether the difference between the groups was significant. The critical ratio for significance at the .05 level of confidence with two degrees of freedom is 5.99. Hence, the difference between persisters and non-persisters with regard to choice of major field were not significant.

TABLE XX

THE RELATIONSHIP BETWEEN PERSISTERS AND NON-PERSISTERS  
 WITH RESPECT TO CHOICE OF MAJOR FIELD

Choice of Major	Persisters		Non-persisters		X <sup>2</sup>
	Observed Frequency	Expected Frequency	Observed Frequency	Expected Frequency	
Blank	8	11.48	7	3.52	4.71
Declared	320	316.09	93	96.91	
Undeclared	295	295.43	91	90.57	
Totals	623	623.00	191	191.00	(N=814)

Probability > X<sup>2</sup> .0929

Hypothesis II. There is no Significant Difference Between Persisters and Non-persisters With Regard to the Degree of Satisfaction Expressed With the College Community

The comparison of the satisfaction scores of persisters and non-persisters is shown in Table II. The critical F score at the .05 confidence level with 1 degree of freedom for the lesser mean square and 813 degrees of freedom for the greater mean square is 254. Since the obtained F value is considerably below that required for significance, it can be said that there was no significant difference between persisters and non-persisters with regard to the degree of satisfaction expressed with the college community. The slightly higher mean satisfaction score of persisters occurred merely by chance.

These findings do not support those of Starr, Betz, and Menne (1972), although the present study produced findings similar to those of Iffert (1958). It is possible that satisfaction with the many aspects of college life is difficult for a freshman student to assess very early in his college career.

Hypothesis III(a). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to High School Grade Point Average

As can be seen in Table XXI, the differences in the mean satisfaction scores of students classified according to

grade point averages from high school were not significant. The critical ratio at the .05 level of confidence with the given degrees of freedom is 5.63; the obtained F score of .6617 was considerably lower than that required for significance.

TABLE XXI  
THE EFFECT OF HIGH SCHOOL GRADE POINT  
AVERAGE ON SATISFACTION

Source (N=797)	SS	df	MS	F
Grade Point Average	3221.605	4	805.401	.6617
Residual	963986.623	792	1217.155	
Corrected Total	967208.228	796	1215.086	

Probability > F .6219

It is interesting to note, though the difference was not significant, that those students who had the highest grades from high school were the least satisfied with college life, while those who had the lowest high school academic records had the highest mean satisfaction score.

Hypothesis III(b). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects According to High School Rank in Class

In order to determine the statistical significance of the difference in satisfaction scores of subjects classified according to high school rank in class, an analysis of variance was used. The results of the test for significance can be seen in Table XXII. Since the obtained F value of .3578 was lower than the critical ratio of F with the given degrees of freedom, the difference was not significant.

TABLE XXII  
THE EFFECT OF HIGH SCHOOL RANK  
IN CLASS ON SATISFACTION

Source (N=709)	SS	df	MS	F
High School Rank	1317.968	3	439.323	.3578
Residual	865559.219	705	1227.743	
Corrected Total	866877.188	708	1224.403	

Probability > F .7865



Hypothesis III(c). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to ACT Composite Standard Scores

In examining this hypothesis, an analysis of variance was again used. The results of the calculations, as can be seen in Table XXIII, indicate that there was no significant difference in the degree of satisfaction expressed by subjects classified according to ACT composite standard scores.

TABLE XXIII  
THE EFFECT OF ACT SCORES ON SATISFACTION

Source (N=806)	SS	df	MS	F
ACT Scores	9541.871	4	2385.478	1.9837
Residual	963220.432	801	1202.522	
Corrected Total	972762.303	805	1208.400	

Probability > F .0940

Hypothesis III(d). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to the Number of Credit Hours in Which Enrolled

Comparisons of the satisfaction scores of students classified according to the number of credit hours in which they were enrolled may be seen in Table XXIV. The F value

of .5347 was not greater than or equal to the critical ratio of 3.53; therefore there was no significant difference in the satisfaction scores among the categories of subjects.

TABLE XXIV  
THE EFFECT OF NUMBER OF CREDIT HOURS ON SATISFACTION

Source (N=805)	SS	df	MS	F
Number of Credit Hours	1941.246	3	647.082	.5347
Residual	969337.544	801	1210.159	
Corrected Total	971278.790	804	1208.058	

Probability > F .6630

Hypothesis III(e). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Number of Hours Devoted to Study

The statistical relationship of the satisfaction scores of subjects in the five categories of hours devoted to study is shown in Table XXV. The critical ratio of F with the given degrees of freedom is 2.39. The obtained F value of 5.5767 indicates that the difference in satisfaction of students classified according to the number of hours devoted to study was significant at the .0004 level of confidence. The

highest degree of satisfaction was expressed by students who studied from 36 to 47 hours per week, while the lowest mean satisfaction score was recorded for those subjects who studied 48 hours or more (See Table V).

TABLE XXV  
THE EFFECT OF NUMBER OF HOURS DEVOTED TO  
STUDY ON SATISFACTION

Source (N=814)	SS	df	MS	F
Number of Hours of Study	26254.831	4	6563.708	5.5767
Residual	952176.286	809	1176.979	
Corrected Total	978431.117	813	1203.482	

Probability > F .0004

Hypothesis III(f). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Extent of Participation in Extra-curricular Activities

In order to test this hypothesis for significance, an analysis of variance was used. An F value equal to or greater than 3.02 was required for significance at the .05 level of confidence with the given degrees of freedom. The obtained F value of 10.609 indicates that there was a

significant difference in the degree of satisfaction expressed by students classified according to participation in extra-curricular activities. This statistical relationship is presented in Table XXVI.

TABLE XXVI  
THE EFFECT OF PARTICIPATION IN ACTIVITIES  
ON SATISFACTION

Source (N=814)	SS	df	MS	F
Number of Activities	24946.169	2	12473.084	10.6091
Residual	953484.948	811	1175.690	
Corrected Total	978431.117	813	1203.482	

Probability > F .0001

Though it might seem logical to assume that students who are more involved in their milieu would feel more a part of the culture and, hence, more satisfied with college life, that assumption was not supported by the data. On the contrary, students who were not involved in any extra-curricular activities had the highest mean satisfaction scores, while students who were involved in two or more activities very early in their first semester were the least satisfied, according to their mean satisfaction score (shown in Table V).

Hypothesis III(g). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Membership in a Fraternity or Sorority

Table XXVII shows the results of the analysis of variance for the effect of sorority or fraternity membership on satisfaction. The obtained F value of 11.61 was considerably greater than 3.86, the critical ratio at the .05 level of confidence. The data indicate that the difference in satisfaction of fraternity and non-fraternity subjects was significant at the .0011 confidence level. It is noted in Table V that fraternity/sorority members had a lower mean satisfaction score than did non-members of a fraternity or sorority.

TABLE XXVII

## THE EFFECT OF FRATERNITY MEMBERSHIP ON SATISFACTION

Source (N=813)	SS	df	MS	F
Fraternity-Sorority Membership	13780.318	1	13780.318	11.6117
Residual	962460.880	811	1186.758	
Corrected Total	976241.198	812	1202.267	

Probability > F .0011

Hypothesis III(h). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Number of Leadership Positions Held

An analysis of variance was applied to the data to determine the statistical significance of the difference in satisfaction expressed by subjects classified according to the number of offices held. Since the obtained F value was less than that required for significance, it can be said that the difference in the mean scores of the three categories of students was not significant (See Table XXVIII).

TABLE XXVIII  
THE EFFECT OF NUMBER OF LEADERSHIP  
POSITIONS ON SATISFACTION

Source (N=812)	SS	df	MS	F
Leadership Positions	3721.075	2	1860.537	1.5554
Residual	967733.894	809	1196.210	
Corrected Total	971454.969	811	1197.848	

Probability > F .2099

There was a trend, however, though not significant, for the students who held two or more offices in organizations other than their living groups to express the least

satisfaction. Students who held no offices were the most satisfied, as indicated by their mean satisfaction scores presented in Table V.

Hypothesis III(i). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Type of Residence

As can be seen in Table XXIX, the type of residence of the subjects was significantly related to satisfaction scores on the Student Satisfaction Questionnaire. The F value of 6.30 was considerably higher than 2.62, or that required for the given degrees of freedom at the .05 level of confidence.

TABLE XXIX

THE EFFECT OF TYPE OF RESIDENCE ON SATISFACTION

Source (N=814)	SS	df	MS	F
Residence	22310.534	3	7436.845	6.3003
Residual	956120.583	810	1180.395	
Corrected Total	978431.117	813	1203.482	

Probability > F .0006

Those students reporting the highest mean score (194.26) on satisfaction were those who lived in their own homes or apartments. Those living at home with parents had the second

highest score (179.03), while sorority/fraternity house residents and dormitory residents had virtually the same mean satisfaction scores (168.30 and 168.96 respectively). The overall mean score was 169.77 (See Table V).

Hypothesis III(j). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Number of Hours per Week Devoted to Self-support

Using an analysis of variance to test this hypothesis, the writer found that the difference among the subjects when classified according to number of hours spent working was not significant. An F value of 2.39 is required for significance at the .05 level of confidence with the degrees of freedom given in Table XXX. The obtained F value of 2.217 was slightly lower than the critical ratio, indicating that the number of hours per week which a subject worked was not significantly related to his satisfaction with college life.

It is noted in Table V that the lowest mean satisfaction score was computed for those who did not work at all, and as the number of hours of work per week increased, the subjects reported higher satisfaction scores.

Hypothesis III(k). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Age

The comparisons of satisfaction scores of subjects classified according to age can be seen in Table XXXI. The



TABLE XXX  
 THE EFFECT OF HOURS DEVOTED TO  
 SELF-SUPPORT ON SATISFACTION

Source (N=813)	SS	df	MS	F
Hours Devoted to Self-Support per Week	10621.753	4	2655.438	2.2171
Residual	967748.950	808	1197.709	
Corrected Total	978370.704	812	1204.890	

Probability > F .0645

required F value for the given degrees of freedom at the .05 level of confidence is 2.39. Since the obtained F value was 1.09, less than that required for significance, there was no significant difference in the degree of satisfaction expressed by subjects classified according to age.

TABLE XXXI  
THE EFFECT OF AGE ON SATISFACTION

Source (N=813)	SS	df	MS	F
Age	5278.663	4	1319.666	1.0957
Residual	973147.465	808	1204.390	
Corrected Total	978426.128	812	1204.958	

Probability  $> F$  .3575

It is interesting to note, however, that as age increased, the mean satisfaction scores of the subjects increased, as may be seen in Table V. This finding is contrary to that of a similar study by Betz, Klingensmith, and Menne (1970), who found that freshman students (or the youngest group of students they tested) reported the highest mean scores on several aspects of satisfaction, while the oldest students in their study (seniors), reported the lowest scores.

Hypothesis III(1). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Sex

Table XXXII shows the results of the analysis of variance used in testing this hypothesis. The males of the sample had the higher mean score (173.84) when compared to the females (mean score 165.59). The difference in the scores was significant, since the obtained F score of 11.6585 was greater than the critical ratio of 3.86.

TABLE XXXII  
THE EFFECT OF SEX ON SATISFACTION

Source (N=814)	SS	df	MS	F
Sex	13849.277	1	13849.277	11.6585
Residual	964581.840	812	1187.909	
Corrected Total	978431.177	813	1203.482	

Probability > F .001

These findings differ from those of Betz, Starr, and Menne (1972). In their study of ten public and private universities and colleges, sex differences were found to have a negligible effect on satisfaction. In their study, the mean

satisfaction scores of women were slightly higher, but the differences were not significant.

Hypothesis III(m). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Marital Status

In testing this hypothesis, an analysis of variance was again used. An F value of 1.2578 was obtained, but it was not equal to the critical ratio of 3.03 which is required for significance at the .05 confidence level. Therefore, it can be said that there was no significant difference in the degree of satisfaction expressed by subjects classified according to marital status, as presented in Table XXXIII.

TABLE XXXIII  
THE EFFECT OF MARITAL STATUS ON SATISFACTION

Source (N=812)	SS	df	MS	F
Marital Status	3022.920	2	1511.459	1.2578
Residual	972176.739	809	1201.702	
Corrected Total	975199.659	811	1202.466	

Probability > F .2842

However, there was a trend for married students to express a higher degree of satisfaction than single students,

as may be seen in Table V. Those students with the lowest mean satisfaction score were those who indicated they were divorced. (It should be remembered that there were only two subjects in the "divorced" category).

Hypothesis III(n). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Ethnic Group

An analysis of variance was applied to the data in order to test this hypothesis. The difference of the scores of subjects classified according to ethnic group was not significant, as can be seen in Table XXXIV.

TABLE XXXIV  
THE EFFECT OF ETHNIC GROUP ON SATISFACTION

Source (N=812)	SS	df	MS	F
Ethnic Group	5597.289	4	1399.322	1.1664
Residual	968153.381	807	1199.694	
Corrected Total	973750.670	811	1200.679	

Probability > F .3238

It is noted, however, that the Black students indicated the highest degree of satisfaction (mean score 183.18),

followed by the American Indian subjects (mean score 170.22). The majority of students were classified "all others" and had a mean satisfaction score of 169.67. The Oriental and Spanish American students had satisfaction scores at the lower end of the range (156.71 and 141.33, respectively). These data are presented in Table V.

Hypothesis III(o). There is no Significant Difference in the Degree of Satisfaction Expressed by Subjects Classified According to Choice of Major

When the satisfaction scores of the subjects classified according to choice of major were compared using an analysis of variance, an F value of .1390 was obtained. Data for this computation are shown in Table XXXV. The critical ratio at the .05 level of confidence with the given degrees of freedom is 254. Since the computed F value was less than the critical ratio, there was no significant difference in the satisfaction scores of the two categories of subjects.

Hypothesis IV(a). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for High School Grade Point Average

When the satisfaction scores of persisters in each of the categories of high school grade point averages were compared with the scores of non-persisters in the corresponding categories, there was found to be no significant difference

TABLE XXXV  
THE EFFECT OF CHOICE OF MAJOR ON SATISFACTION

Source (N=799)	SS	df	MS	F
Major	167.076	1	167.076	.1390
Residual	958008.198	797	1202.018	
Corrected Total	958175.274	798	1200.721	

Probability > F .7109

in satisfaction between persisters and non-persisters when controlling for grade point average. The results of the analysis of variance used to test the hypothesis may be seen in Table XXXVI.

Hypothesis IV(b). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for High School Rank in Class

Table XXXVII shows the statistical significance of the difference between the scores of persisters and non-persisters classified according to high school rank in class. At the .05 level of confidence with the required degrees of freedom, none of the relationships were found to be significant.

Hypothesis IV(c). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for ACT Composite Standard Score

When this hypothesis was treated statistically to determine the relationship between the groups, no significant differences were found. The results of the analyses of variance used to test this hypothesis are given in Table XXXVIII.



TABLE XXXVI

RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT  
OF SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR HIGH SCHOOL GRADE POINT AVERAGE

Grade Point	N		Mean		SS	df	MS	Probability	
	A*	B*	A	B				F	> F
3.6-4.0	160	27	169.094	156.259	3805.392	1	3805.392	2.9854	.0818
Residual					235806.779	185	1274.631		
Corrected Total					239612.171	186	1288.237		
3.1-3.5	203	50	170.798	156.259	1503.585	1	1503.585	1.2393	.2448
Residual					279662.399	251	1114.193		
Corrected Total					281165.984	252	1115.738		
2.6-3.0	163	50	170.025	166.700	422.903	1	422.903	.3426	.5661
Residual					260498.402	211	1234.589		
Corrected Total					260921.305	212	1230.761		
2.0-2.5	71	51	171.845	169.471	167.343	1	167.343	.1309	.7189
Residual					153370.002	120	1278.084		
Corrected Total					153537.344	121	1268.904		
Below 2.0	14	8	181.500	163.875	1581.443	1	1581.443	1.1641	.2937
Residual					27168.375	20	1358.419		
Corrected Total					28749.818	21	1369.039		

\*In Tables XXVI through L, A will refer to persisters and B will refer to non-persisters as designated in Chapter I, page 12.

TABLE XXXVII  
 RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR RANK IN CLASS

Rank	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
1st Quarter	298	60	168.483	169.483	45.053	1	45.053	.0379	.8401
Residual					423487.148	356	1189.571		
Corrected Total					423532.201	357	1186.365		
2nd Quarter	159	53	172.264	167.717	821.901	1	821.901	.6439	.5711
Residual					268027.660	210	1276.322		
Corrected Total					268849.561	211	1274.169		
3rd Quarter	69	37	172.000	168.919	228.639	1	228.639	.1893	.6685
Residual					125634.757	104	1208.027		
Corrected Total					125863.396	105	1198.699		
4th Quarter	18	15	172.167	174.553	45.827	1	45.827	.300	.8577
Residual					47268.233	31	1524.782		
Corrected Total					47314.061	32	1478.564		

TABLE XXXVIII  
 RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECTS  
 OF SATISFACTION ON PERSISTENCE WHEN  
 CONTROLLING FOR ACT SCORE

ACT	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
18 - Below	149	66	166.906	168.303	89.264	1	89.264	.0817	.7724
Residual					232734.624	213	1092.651		
Corrected Total					232823.888	214	1087.962		
19 - 21	123	43	167.780	160.651	1619.430	1	1619.430	1.6016	.2047
Residual					165830.841	164	1011.164		
Corrected Total					167450.271	165	1014.850		
22 - 25	189	55	172.672	173.164	10.299	1	10.299	.0076	.9278
Residual					325165.189	242	1343.658		
Corrected Total					325175.488	243	1338.171		
26 - 29	140	23	174.043	165.391	1478.619	1	1478.619	1.0734	.3022
Residual					221785.221	161	1377.548		
Corrected Total					223263.840	162	1378.172		
30 - Above	18	0	158.944						
Residual									
Corrected Total									

Hypothesis IV(d). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Number of Credit Hours in Which Enrolled

Table XXXIX shows the results of the analyses of variance employed to test this hypothesis. The obtained F values were less than the critical ratios required at the .05 level of confidence. Therefore, the differences in the satisfaction scores of persisters and non-persisters when classified according to number of credit hours in which subjects were enrolled were not significant.

Hypothesis IV(e). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for Number of Hours Devoted to Study

An analysis of variance was used to determine the statistical significance of the relationship between the satisfaction of persisters and non-persisters classified according to number of hours spent studying. As is shown in Table XL, none of the differences between the groups of subjects in any of the five classifications were significant.

TABLE XXXIX

RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT  
OF SATISFACTION ON PERSISTENCE WHEN  
CONTROLLING FOR HOURS  
IN WHICH ENROLLED

Hours	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
12 - 14	173	79	172.098	170.038	230.213	1	230.213	.1810	.6747
Residual					317978.216	250	1271.913		
Corrected Total					318208.429	251	1267.763		
15 - 16	378	98	170.219	166.071	1339.120	1	1339.119	1.0984	.2953
Residual					577877.275	474	1219.150		
Corrected Total					579216.395	475	1219.403		
17 - 18	61	13	165.426	169.615	188.059	1	188.059	.1899	.6683
Residual					71283.995	72	990.055		
Corrected Total					71472.054	73	979.069		
19 - Over	1	0	177.666						
Residual									
Corrected Total									

TABLE XL

RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR HOURS DEVOTED TO STUDY

Hours of Study	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Fewer than 12	192	77	174.901	175.013	.689	1	.689	.0005	.9797
Residual					348086.107	267	1303.693		
Corrected Total					348086.796	268	1298.831		
12-23	335	94	166.931	162.585	1286.571	1	1386.571	1.2995	.2536
Residual					455608.240	427	1066.998		
Corrected Total					456994.811	428	1067.745		
24-35	86	15	173.721	163.667	1291.127	1	1291.127	.9954	.6784
Residual					128418.636	99	1297.158		
Corrected Total					129709.762	100	1297.098		
36-47	9	3	173.555	212.333	3383.361	1	3383.361	2.4825	.1437
Residual					13628.889	10	1362.889		
Corrected Total					17012.250	11	1546.568		
48 or More	1	2	96.00	119.00	368.167	1	368.167	81.8148	.0708
Residual					4.500	1	4.500		
Corrected Total					362.667	2	186.333		

Hypothesis IV(f). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Participation in Extra-curricular Activities

In order to compute, statistically, the relationship between the satisfaction scores of persisters and non-persisters controlling for participation in extra-curricular activities, analyses of variance were used. In analyzing the data from those subjects who participated in two or more activities, there was found a significant difference in the mean satisfaction scores of persisters and non-persisters, with persisters reporting significantly higher satisfaction scores than non-persisters as presented in Table XLI.

Hypothesis IV(g). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for Fraternity/Sorority Membership

Statistical treatment of the data to determine the relationship of the mean satisfaction scores of the groups when classified according to sorority or fraternity membership showed F values less than the critical ratio required for significance. Though there was a tendency for both fraternity and non-fraternity persisters to be slightly more satisfied than their non-persisting counterparts, the differences were not significant. Highest satisfaction was

TABLE XLI  
 RESULTS OF ANALYSIS OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR PARTICIPATION IN ACTIVITIES

Activities	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
None	247	101	174.951	174.525	13.050	1	13.050	.0098	.9177
Residual					457206.605	346	1321.406		
Corrected Total					457219.655	347	1317.636		
One	185	50	170.557	170.000	12.201	1	12.201	.0111	.9124
Residual					254371.654	233	1091.724		
Corrected Total					254383.855	234	1087.110		
Two or More	191	40	164.058	149.075	7424.296	1	7424.296	7.2515	.0076
Residual					234457.141	229	1023.830		
Corrected Total					241881.437	230	1051.658		



expressed by non-fraternity persisters. The results of the analyses of variance are shown in Table XLII.

Hypothesis IV(h). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for Number of Leadership Positions

The F values obtained to determine the significant differences between satisfaction scores of persisters and non-persisters classified according to number of leadership positions were not statistically significant. Those students who reported the highest satisfaction were persisters who had not been elected to any leadership positions. Those students who held two or more offices and who did not persist were the least satisfied. (See Table XLIII).

Hypothesis IV(i). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With Their College Life When Controlling for Type of Residence

As is shown in Table XLIV, the F value obtained when comparing the satisfaction scores of persisters and non-persisters who lived at home with parents was found to be significant at the .0269 level of confidence. Those students who lived at home and did not persist reported a higher mean satisfaction score than did persisters who lived at home. In comparisons the two groups in each of the other

TABLE XLII

RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR FRATERNITY/SORORITY MEMBERSHIP

Fraternity Membership	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Yes	128	21	162.711	151.524	2257.773	1	2257.773	2.5037	.1117
Residual					132559.543	147	901.766		
Corrected Total					134817.315	148	910.928		
No	494	170	172.370	170.047	682.733	1	682.733	.5465	.5332
Residual					826960.832	662	1249.186		
Corrected Total					827643.565	663	1248.331		

TABLE XLIII

RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR NUMBER OF LEADERSHIP POSITIONS

Positions	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
None	500	162	170.526	169.031	273.520	1	273.519	.2250	.6409
Residual					802155.508	660	1215.387		
Corrected Total					802429.027	661	1213.962		
One	104	24	170.096	165.208	465.870	1	465.870	.3992	.5358
Residual					147052.997	126	1167.087		
Corrected Total					147518.867	127	1161.566		
Two or More	17	5	159.529	148.400	478.565	1	478.565	.5530	.5280
Residual					17307.435	20	865.372		
Corrected Total					17786.000	21	846.952		

TABLE XLIV

RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR TYPE OF RESIDENCE

Residence	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
At home w/ parents	26	7	173.154	200.857	4232.728	1	4232.728	5.2785	.0269
Residual					24858.242	31			
Corrected Total					29090.969	32			
Residence Hall	516	152	169.124	165.546	1503.115	1	1503.115	1.2695	.2591
Residual					788531.740	666	1183.982		
Corrected Total					790034.855	667	1184.460		
Sor/Frat House	63	20	171.317	161.550	1448.291	1	1448.291	1.0642	.3069
Residual					110236.601	81	1360.946		
Corrected Total					111684.892	82	1362.011		
Own Apt., House	18	12	196.556	190.833	235.756	1	235.756	.2633	.6176
Residual					25074.111	28	895.504		
Corrected Total					25309.867	29	872.754		

classifications of residence, analyses of variance were also applied to the data. No significant differences were found.

Hypothesis IV(j). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Hours Devoted to Self-support per Week

As indicated in Table XLV, the F values obtained to determine the significance of difference between persisters and non-persisters with respect to satisfaction when controlling for hours per week spent working were not equal to the critical ratios required for significance. Hence, the differences in the satisfaction scores tested were not significant. It is noted that the student who worked the greatest number of hours and did not persist was the student who expressed the greatest degree of satisfaction. Those who were the least satisfied were those who worked from 11 to 20 hours and did not persist.

Hypothesis IV(k). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Age

No significant differences between the groups were found when the satisfaction scores of persisters and non-persisters in each of the age categories were tested using for significance the analysis of variance. The results of

TABLE XLV

RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR HOURS DEVOTED TO SELF-SUPPORT

Hours of Work	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
None	511	156	169.462	167.154	636.632	1	636.632	.5243	.5237
Residual					807537.314	665	1214.342		
Corrected Total					808173.946	666	1213.474		
10 or fewer	39	13	170.692	171.462	5.769	1	5.769	.0050	.9419
Residual					57009.538	50	1140.191		
Corrected Total					57015.308	51	1117.947		
11 - 20	61	14	174.607	165.857	871.675	1	871.675	.7445	.6047
Residual					85472.272	73	1170.853		
Corrected Total					86343.947	74	1166.810		
21 - 30	10	6	177.500	175.833	10.417	1	10.417	.0096	.9201
Residual					15147.333	14	1081.952		
Corrected Total					15157.750	15	1010.517		
31 - 40	2	1	211.500	246.000	793.500	1	793.500	3.0000	.3382
Residual					264.500	1	264.500		
Corrected Total					1058.00	2	529.000		

the statistical treatment of the data may be seen in Table XLVI.

Hypothesis IV(l). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Sex

Male persisters indicated the greatest degree of satisfaction with college life, as shown in Table XLVII. However, the differences between persisters and non-persisters in the two categories, when tested for significance with analyses of variance, were not found to be significant at the .05 level of confidence.

Hypothesis IV(m). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Marital Status

When this hypothesis was tested using the analysis of variance on the data from each of the three categories of marital status reported, no significant differences were found between persisters and non-persisters. It is noted that married students who persisted had the highest mean satisfaction score, as indicated in Table XLVIII.

TABLE XLVI  
RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
FOR AGE

Age	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Under 18	88	23	165.943	167.130	25.702	1	25.702	.0215	.8784
Residual					130125.325	109	1193.810		
Corrected Total					130151.027	110	1183.191		
18	503	149	170.507	167.779	855.724	1	855.724	.7075	.5946
Residual					786165.417	650	1209.485		
Corrected Total					787021.141	651	1208.942		
19	22	15	178.000	165.333	1430.991	1	1430.991	1.0770	.3072
Residual					46503.333	35	1328.667		
Corrected Total					47934.324	36	1331.509		
20	3	1	180.000	229.000	1800.750	1	1800.750	.2226	.1029
Residual					438.000	2	219.000		
Corrected Total					2238.750	3	746.250		
Over 20	6	3	184.167	179.333	46.722	1	46.722	.0568	.8123
Residual					5755.500	7	822.214		
Corrected Total					5802.222	8	725.278		



TABLE XLVII  
 RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR SEX

Sex	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Female	312	90	166.077	163.911	327.652	1	327.652	.3059	.5875
Residual					428503.443	400			
Corrected Total					428831.095	401			
Male	311	101	174.550	171.663	635.213	1	635.213	.4867	.5070
Residual					535115.532	410	1305.160		
Corrected Total					535750.745	411	1303.530		

TABLE XLVIII  
 RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR MARITAL STATUS

Marital Status	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Married	12	4	173.000	170.000	27.000	1	27.00	.0170	.9157
Residual					35336.000	14	2524.000		
Corrected Total					35363.000	15	2357.533		
Single	607	187	170.270	167.968	757.742	1	757.742	.6418	.5710
Residual					935043.498	792	1180.610		
Corrected Total					935801.239	793	1180.077		
Divorced	2	0	131.500						
Residual									
Corrected Total									

Hypothesis IV(n). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Ethnic Group

Among the Negro, Oriental, American Indian, and Other classifications of ethnic group, persisters had higher mean satisfaction scores than did non-persisters. However, none of these differences were significant at the .05 level of confidence. Among Spanish subjects, the one student who did not persist had a higher satisfaction score than the mean of the two subjects who did persist. Results of the statistical treatment of the data may be seen in Table XLIX.

Hypothesis IV(o). There is no Significant Difference Between Persisters and Non-persisters With Respect to Satisfaction With College Life When Controlling for Choice of Major

In Table L are reported the results of the analyses of variance employed to determine the relationship between the scores of persisters and non-persisters classified according to choice of major. The differences were not found to be significant at the .05 level of confidence. It is noted that the subjects who seemed to have a specific goal in mind (that is, a declared major and persistence in college) had the highest mean satisfaction score.

TABLE XLIX  
 RESULTS OF THE ANALYSES OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR ETHNIC GROUP

Ethnic Group	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Negro	7	4	194.286	163.750	2373.458	1	2373.458	1.4141	.2643
Residual					15106.179	9	1678.464		
Corrected Total					17479.636	10	1747.964		
Oriental	5	2	162.400	142.500	565.729	1	565.729	.2658	.6307
Residual					10643.700	5	2128.740		
Corrected Total					11209.429	6	1868.238		
American Indian	12	6	170.500	169.667	2.778	1	2.778	.0024	.9601
Residual					18116.333	16	1132.271		
Corrected Total					18119.111	17	1065.830		
Spanish American	2	1	132.500	159.000	468.167	1	468.167	19.1088	.1505
Residual					24.500	1	24.500		
Corrected Total					492.667	2	246.333		
All Others	596	177	170.122	168.152	529.598	1	529.598	.4437	.5128
Residual					920322.940	771	1193.674		
Corrected Total					920852.538	772	1192.814		

TABLE L  
 RESULTS OF THE ANALYSIS OF VARIANCE FOR THE EFFECT OF  
 SATISFACTION ON PERSISTENCE WHEN CONTROLLING  
 FOR CHOICE OF MAJOR

Major	N		Mean		SS	df	MS	Probability	
	A	B	A	B				F	> F
Declared	320	93	170.375	169.505	20.404	1	20.404	.0159	.8952
Residual					526960.747	411	1282.143		
Corrected Total					526981.201	412	1279.081		
Undecoared	295	91	169.854	166.242	907.584	1	907.584	.8103	.6281
Residual					430119.414	384	1120.103		
Corrected Total					431026.997	385	1119.550		

## Summary

In determining the relationship between persisters and non-persisters with regard to selected personal and academic factors, 16 hypotheses were tested. Those independent variables which were significantly related to persistence were:

- a. high school grade point average.
- b. high school rank in class.
- c. ACT composite standard score.
- d. number of credit hours in which enrolled.
- e. number of hours per week devoted to study.
- f. participation in extra-curricular activities.
- g. sorority/fraternity membership.

Those variables not significantly related to persistence were:

- a. number of leadership positions assumed.
- b. type of residence.
- c. hours per week devoted to self-support.
- d. age.
- e. sex.
- f. marital status.
- g. ethnic group.
- h. choice of major field.
- i. satisfaction with college life.

As can be seen in Table LI, those variables which were most significantly related to persistence were high school grade point average, high school rank in class, and ACT composite standard score.

TABLE LI  
 THE RELATIONSHIP BETWEEN PERSISTERS AND NON-  
 PERSISTERS WITH REGARD TO SIXTEEN  
 INDEPENDENT VARIABLES

Hypothesis	Variable	X <sup>2</sup> or F	Level of Significance
I(a).	High School Grade Point Average	X <sup>2</sup> =35.63	.0001*
I(b).	High School Rank in Class	X <sup>2</sup> =25.95	.0001*
I(c).	ACT Composite Standard Score	X <sup>2</sup> =23.53	.0003*
I(d).	Number of Hours in Which Enrolled	X <sup>2</sup> =14.03	.0073*
I(e).	Hours Devoted to Study	X <sup>2</sup> =11.87	.0183*
I(f).	Extra-Curricular Activities	X <sup>2</sup> =11.47	.0034*
I(g).	Sorority/Fraternity Membership	X <sup>2</sup> = 9.28	.0097*
I(h).	Number of Leadership Positions	X <sup>2</sup> = 2.58	.4638
I(i).	Type of Residence	X <sup>2</sup> = 4.87	.1801
I(j).	Hours Devoted to Self-Support	X <sup>2</sup> = 6.21	.2855
I(k).	Age	X <sup>2</sup> = 7.40	.1907
I(l).	Sex	X <sup>2</sup> =5.10	.4811
I(m).	Marital Status	X <sup>2</sup> = 1.25	.7445
I(n).	Ethnic Group	X <sup>2</sup> = 3.18	.6745
I(o)	Choice of Major Field	X <sup>2</sup> = 4.71	.0929
II.	Satisfaction	F = .640	.5704

\*Significantly related at the .05 level or beyond.

Another group of 15 hypotheses were tested to determine those independent variables which might be significantly related to satisfaction. The significant variables were:

- a. number of hours devoted to study.
- b. participation in extra-curricular activities.
- c. fraternity/sorority membership.
- d. type of residence.
- e. sex.

Those variables found not to be significantly related to satisfaction were:

- a. high school grade point average.
- b. high school rank in class.
- c. ACT composite standard scores.
- d. number of credit hours in which enrolled.
- e. number of leadership positions.
- f. number of hours devoted to self-support.
- g. age.
- h. marital status.
- i. ethnic group.
- j. choice of major.

As reported in Table LII, the critical ratios of the four significant variables were significant at the .001 level of confidence or beyond.

Finally, 15 hypotheses were tested to determine if there were differences between persisters and non-persisters when grouped according to variable classifications. Those comparisons in which significant were found were:



TABLE LII  
THE EFFECT OF FIFTEEN INDEPENDENT  
VARIABLES ON SATISFACTION

Hypothesis	Variable	F	Level of Significance
III(a).	High School Grade Point Average	.6617	.6219
III(b).	High School Rank in Class	.3578	.7865
III(c).	ACT Composite Standard Score	1.9837	.0940
III(d).	Number of Hours in Which Enrolled	.5347	.6630
III(e).	Hours Devoted to Study	5.5767	.0004*
III(f).	Participation in Activities	10.6091	.0001*
III(g).	Sorority/Fraternity Membership	11.6117	.0011*
III(h).	Number of Leadership Positions	1.5554	.2099
III(i).	Type of Residence	6.3003	.0006*
III(j).	Hours Devoted to Self-Support	2.2171	.0645
III(k).	Age	1.0957	.3575
III(l).	Sex	11.6585	.0010*
III(m).	Marital Status	1.2578	.2842
III(n).	Ethnic Group	1.1664	.3238
III(o).	Choice of Major	.1390	.7109

\*Significant at the .05 level or beyond.

- a. subjects involved in two or more extra-curricular activities.
- b. subjects who lived at home with parents.

In none of the remaining 55 comparisons were there found significant differences, as shown in Table LIII.

TABLE LIII  
 THE EFFECT OF SATISFACTION ON PERSISTENCE  
 WHEN CONTROLLING FOR FIFTEEN  
 SELECTED VARIABLES

Hypothesis	Variable Classification	F	Level of Significance
IV(a).	High School Grade Point Average		
	a. 3.6-4.0	2.9854	.0818
	b. 3.1-3.5	1.4393	.2448
	c. 2.6-3.0	.3426	.5661
	d. 2.0-2.5	.1309	.7189
	e. Below 2.0	1.1641	.2937
IV(b).	High School Rank in Class		
	a. First quarter	.0379	.8401
	b. Second quarter	.0379	.8401
	c. Third quarter	.1893	.6685
	d. Fourth quarter	.0300	.8577
IV(c).	ACT Composite Standard Score		
	a. 18-Below	.0817	.7724
	b. 19-21	1.6016	.2047
	c. 22-25	.0076	.9278
	d. 26-29	1.0734	.3022
	e. 30-Above		
IV(d).	Hours in Which Enrolled		
	a. 12-14	.1810	.6747
	b. 15-16	1.0984	.2953
	c. 17-18	.1899	.6683
	d. 19-Over		
IV(e).	Hours Devoted to Study		
	a. Fewer than 12	.0005	.9797
	b. 12-23	1.2995	.2536
	c. 24-35	.9954	.6784
	d. 36-47	2.4825	.1437
	e. 48-More	81.8148	.0708
IV(f).	Participation in Activities		
	a. None	.0098	.9177
	b. One	.0111	.9124
	c. Two or more	7.2515	.0076*
IV(g).	Fraternity/Sorority Membership		
	a. Yes	2.5037	.1117
	b. No	.5465	.5322

TABLE LIII (Continued)

Hypothesis	Variable Classification	F	Level of Significance
IV(h).	Number of Leadership Positions		
	a. None	.2250	.6409
	b. One	.3992	.5358
	c. Two or more	.5530	.5280
IV(i).	Type of Residence		
	a. At home w/parents	5.2785	.0269*
	b. Residence hall	1.2695	.2591
	c. Sor./Frat. house	1.0642	.3069
	d. Own apt., house	.2633	.6176
IV(j).	Hours Devoted to Self-Support		
	a. None	.5243	.5237
	b. 10 or fewer	.0050	.9419
	c. 11-20	.7445	.6047
	d. 21-30	.0096	.9201
	e. 31-40	3.0000	.3382
IV(k).	Age		
	a. Under 18	.0215	.8784
	b. 18	.7075	.5946
	c. 19	1.0770	.3072
	d. 20	.2226	.1029
	e. Over 20	.0568	.8123
IV(l).	Sex		
	a. Female	.3059	.5875
	b. Male	.4867	.5070
IV(m).	Marital Status		
	a. Married	.0170	.9157
	b. Single	.6418	.5710
	c. Divorced		
IV(n).	Ethnic Group		
	a. Negro	1.4141	.2643
	b. Oriental	.2658	.6307
	c. American Indian	.0024	.9601
	d. Spanish American	19.1088	.1505
	e. All Others	.4437	.5128
IV(o).	Choice of Major Field		
	a. Declared	.0159	.8952
	b. Undeclared	.8103	.6281

\*Significant at the .05 level or beyond.

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The general purpose of this study was to determine if there were significant differences between those subjects of the 1973 freshman class at Oklahoma State University who withdrew during their first year of college and those who returned for their second year.

The problem of the study was concerned with the relationship which existed between withdrawal of freshman students at Oklahoma State University and selected personal and social factors.

The sample was composed of 814 freshman students enrolled in orientation classes in the College of Arts and Sciences. The data were collected during September, 1973, from personnel records and from a questionnaire which was submitted to the subjects.

The questionnaire consisted of 7 items designed to secure background information, and 82 items designed to measure the degree of satisfaction expressed with life at Oklahoma State University. A total of 81 items were taken from the College Student Satisfaction Questionnaire developed by Betz, Menne, and Klingensmith (1970).

The chi square test was used in an item analysis of the Student Satisfaction Questionnaire to determine those items which significantly differentiated those subjects scoring in the highest quarter and those scoring in the lowest quarter on the basis of total scale scores. All 82 items were found to be significantly discriminating at the .0001 level of confidence. A split-half reliability coefficient of .9468 was obtained using the Spearman-Brown correction formula.

In a test for empirical validity, total satisfaction scores were compared to answers on item 89 (see Appendix). A Pearson r of .5005 was obtained, indicating significance at the .001 level of confidence.

A chi square test was used to determine if persistence were independent of 16 selected variables. Those variables found to be significantly related to persistence were (a) high school grade point average, (b) high school rank in class, (c) ACT composite standard score, (d) number of hours spent studying per week, (e) participation in extra-curricular activities, (f) fraternity/sorority membership, and (g) number of credit hours in which enrolled.

An analysis of variance was used to determine if satisfaction with college life were independent of 15 selected variables. Satisfaction was found to be significantly related to the following variables: (a) hours spent studying, (b) participation in extra-curricular activities,

(c) membership in a fraternity/sorority, (d) type of residence, (e) sex.

An analysis of the variance was used to determine if there were a difference in the satisfaction of persisters and non-persisters when controlling for 15 selected variables. Significant differences were found in the satisfaction scores of persisters and non-persisters in two classifications: (a) subjects who participated in two or more extra-curricular activities and (b) those subjects who lived at home with their parents.

### Conclusions

The following conclusions are drawn from the analysis and evaluation of those data resulting exclusively from the present investigation.

1. The better the academic preparation in high school, as evidenced by high school grades, rank in class, and college entrance exam scores, the greater the likelihood that the subjects would remain in school. However, academic preparation was not related to satisfaction.

2. The more involved in the campus social milieu a student was, (that is, a member of sorority or fraternity or participating in extra-curricular activities), the more likely he was to persist in school, but the less likely he was to express a high degree of satisfaction. Holding offices in these organizations seemed to have little to do with either a student's satisfaction or persistence.

3. The number of hours per week devoted to study was significantly related to persistence as well as to satisfaction.

4. Personal factors such as age, sex, marital status, and ethnic group did not significantly affect persistence. Likewise, satisfaction was not significantly related to age, marital status, or ethnic group.

5. Whether or not a subject found college life particularly satisfying was not significantly related to his choosing to remain in school.

6. The type of residence of subjects was not significantly related to persistence, but was significantly related to satisfaction.

7. Males expressed a significantly higher degree of satisfaction than females, but persisted at a slightly lower rate.

8. The choice of a major field was not significantly related to either persistence or to satisfaction.

#### Recommendations

The present study was limited to one college (Arts and Sciences) at the institution and extended over only a one-year period. Similar studies with subjects representing a broader cross-section of the university students, as well as related studies with modifications to the present format, would be worthwhile. Specifically, the following recommendations for further study are offered.



1. Additional research similar to the present investigation involving all colleges at Oklahoma State University to determine withdrawal patterns and factors most significantly related to persistence.

2. Longitudinal studies from freshman through senior college years or until graduation, exploring the withdrawal trends of a particular class.

3. Follow-up interviews with students who do not continue their college careers to determine what forces may be operating that influence withdrawal.

4. A study involving interviews with subjects who express a low degree of satisfaction to determine aspects of college life which may provide the greatest source of frustration and dissatisfaction for students.

5. Studies (using the standardized version of the College Student Satisfaction Questionnaire) designed to compare the degree of satisfaction students express with OSU as compared to the national norms of college student satisfaction. (In other words, the study would answer the question, "How much dissatisfaction or satisfaction is 'normal'?")

6. Research designed to develop a profile of a high risk student--a potential non-persister--to aid counselors in their efforts to reduce the attrition rate through early "diagnosis" and immediate "treatment" of high-risk students.

## A SELECTED BIBLIOGRAPHY

- Abel, Walter H. "Attrition and the Student Who is Certain." Personnel and Guidance Journal, XLIV (June, 1966), 1042-1045.
- § Albino, Judith E. "Sex Differences on Factor Dimensions Related to Withdrawing from College." Paper read at the American Educational Research Association, New Orleans, April 1973, 21 pages.
- Allport, Gordon W. Personality: A Psychological Interpretation. New York: Holt, Rinehart, and Winston, 1937.
- § Ashbaugh, Jo-ann, Cynthia Levin, and Lucy Zaccaria. "Persistence and the Disadvantaged College Student." Journal of Educational Research, LXVII (October, 1973), 64-66.
- § Astin, Alexander W. "Personal and Environmental Factors Associated with College Dropouts Among High Aptitude Students." Journal of Educational Psychology, LV (August, 1964), 219-227.
- § \_\_\_\_\_ . College Dropouts: A National Profile. ACE Research Reports, VII. Washington, D.C.: American Council on Education, 1972.
- \_\_\_\_\_, and Robert J. Panos. The Educational and Vocational Development of College Students. Washington, D.C.: American Council on Education, 1969.
- § Barger, Ben and Everett Hall. "The Interaction of Ability Levels and Socio-Economic Variables in the Prediction of College Drop-Outs and Grade Achievement." Educational and Psychological Measurements, XXV (Summer, 1965), 501-508.
- Bechtoldt, Harold P. "Construct Validity: A Critique." The American Psychologist, XIV (February, 1959), 619-630.
- Betz, Ellen L., John E. Klingensmith, and John W. Menne. "The Measurement and Analysis of College Student Satisfaction." Measurement and Evaluation in Guidance, III (Summer, 1970), 110-118.

- \_\_\_\_\_, John W. Menne, Ann M. Starr, and John E. Klingensmith. "A Dimensional Analysis of College Student Satisfaction." Measurement and Evaluation in Guidance, IV (July, 1971), 99-106.
- \_\_\_\_\_, Ann M. Starr, and John W. Menne. "College Student Satisfaction in Ten Public and Private Colleges and Universities." Journal of College Student Personnel, XIII (September, 1972), 456-461.
- Bowen, Howard R. and Gordon K. Douglass. Efficiency in Liberal Education. New York: McGraw-Hill Book Company, 1971.
- Brabant, S. and A. P. Garbin. "Sex of Student as Defined Sociologically and Higher Education Persistence." Paper read at Southern Sociological Society, April, 1974, 14 pages.
- Carnegie Commission on Higher Education. Less Time, More Options. New York: McGraw-Hill Book Company, 1971a.
- \_\_\_\_\_. New Students and New Places. New York: McGraw-Hill Book Company, 1971b.
- \_\_\_\_\_. The More Effective Use of Resources. New York: McGraw-Hill Book Company, 1972.
- \_\_\_\_\_. Higher Education: Who Pays? Who Benefits? Who Should Pay? New York: McGraw-Hill Book Company, 1973a.
- \_\_\_\_\_. Priorities for Action: Final Report of the Carnegie Commission on Higher Education. New York: McGraw-Hill Book Company, 1973b.
- Caskey, A. L. "Freshman Dropouts and Returnees: Part I." University Counseling Services Research Reports, Number 364. Stillwater, Oklahoma: Oklahoma State University, 1964.
- Chambers, Jay L., Ben Barger, and Lewis Lieberman. "Need Patterns and Abilities of College Dropouts." Educational and Psychological Measurements, XXV (Summer, 1965), 509-516.
- Charles, Don C. "College Performance of Top-Quartile High School Graduates." Journal of Educational Psychology, XXXIX (February, 1948), 82-91.
- Chase, Clinton I. "The College Dropout: His High School Prologue." National Association of Secondary School Principals Bulletin, LIV (January, 1970), 66-71.

- Cheit, Earl F. The New Depression in Higher Education. New York: McGraw-Hill Book Company, 1971.
- § Demitroff, John F. "Student Persistence--An Institutional Approach." College and University, XLIX (Summer, 1974), 553-567.
- § Dole, Arthur A. "Iffert Revisited: Persisters and Defaulters." Journal of College Student Personnel, X (May, 1969), 185-192.
- × Dollar, Robert J. "Interpersonal Values and College Persistence." Journal of College Student Personnel, XI (May, 1970), 200-202.
- × Faunce, Patricia S. "Personality Characteristics and Vocational Interests Related to the Persistence of Academically Gifted Women." Journal of Counseling Psychology, XV (January, 1968), 31-40.
- × \_\_\_\_\_ . The Effect of Personality Characteristics of High, Middle, and Low Ability Students on College Persistence. Washington: Bureau of Research, Office of Education, United States Department of Health, Education, and Welfare, 1973.
- Freedman, Mervin B. "The Passage Through College." Journal of Social Issues, XII (Number 4, 1956), 13-28.
- Good, Carter. Introduction to Educational Research. New York: Appleton-Century-Crofts, Inc., 1959.
- Gough, H. G. Reference Handbook for the Gough Adjective Checklist. Berkeley: University of California Institute of Personality Adjustment and Research, 1955.
- Hanson, Gary R. and Ronald G. Taylor. "Interaction of Ability and Personality: Another Look at the Dropout Problem in an Institute of Technology." Journal of Counseling Psychology, (November, 1970), 540-545.
- Heilbrun, Alfred B. "Prediction of First-Year College Dropouts Using ACL Ned Scales." Journal of Counseling Psychology, IX (Spring, 1962), 58-63.
- Hodgkinson, Harold L. Institutions in Transition: A Profile of Change in Higher Education. New York: McGraw-Hill Book Company, 1971.
- § Iffert, Robert E. "Retention and Withdrawal of College Students." (Bulletin 1958, Number 1) Washington, D.C.: U. S. Department of Health, Education, and Welfare, Office of Education, 1958.

- XIrvin, Floyd S. "Sentence Completion Responses and Scholastic Success or Failure." Journal of Counseling Psychology, XIV (May, 1967), 269-271.
- SJex, Frank B. and Reed M. Merrill. "A Study in Persistence: Withdrawal and Graduation Rates at the University of Utah." Personnel and Guidance Journal, XL (May, 1962), 762-768.
- XJones, John D. "A Study of the Relationship Between the Student's Socio-Economic Background and His Freshman Year in College." Journal of the National Association of Student Personnel Administrators, IX (April, 1971), 234-237.
- Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart, and Winston, 1964.
- Lavin, David E. The Prediction of Academic Performance. New York: Russell Sage Foundation, 1965.
- XLueptow, Lloyd B. "Need for Achievement and Continuation in College." Psychological Reports, XXXIII (October, 1973), 455-458.
- Lumsden, Keith (editor). Efficiency in Universities: The LaPaz Papers. New York: American Elsevier Publishing Company, 1974.
- Machlup, Fritz. The Production and Distribution of Knowledge in the United States. Princeton: Princeton University Press, 1962.
- SMarsh, Lee M. "College Dropouts: A Review." Personnel and Guidance Journal, XLIV (December, 1966), 475-481.
- SMorrisey, Robert J. "Attrition of Probationary Freshmen." Journal of College Student Personnel, XII (July, 1971), 279-285.
- Moses, Stanley. "Notes on the Learning Force." Notes on the Future of Education, Volume I. Syracuse: Syracuse University, 1971.
- S Munger, Paul F. "Factors Related to Persistence in College of Students Who Ranked in the Lower Third of Their High School Class." Journal of Counseling Psychology, I (Summer, 1954), 132-136.
- S \_\_\_\_\_ . "Student Persistence in College." Personnel and Guidance Journal, XLIV (April, 1956), 475-481.

- Oklahoma State Regents for Higher Education. "In and Out of College." Report I. Oklahoma City: Oklahoma State Regents for Higher Education, 1964.
- XPandey, R. E. "A Comparative Study of Dropouts at an Integrated University: The 16 Personality Factor Test." Journal of Negro Education, XLII (Fall, 1973), 447-451.
- Parten, Mildred. Survey, Polls, and Samples: Practical Procedures. New York: Cooper Square Publishers, Inc., 1966.
- SPervin, Lawrence A. and Donald B. Rubin. "Student Dissatisfaction with College and the College Dropout: A Transactional Approach." Journal of Social Psychology, LXXII (August, 1967), 285-295.
- Pitcher, Robert W. and Babette Blaushild. Why College Students Fail. New York: Funk and Wagnalls, 1970.
- SPulcrano, Charles. "The Class of 1960: A Study of the College Survival Rate." The School Counselor, XVI (March, 1969), 277-281.
- Robinson, Lehmann F. "Relation of Student Persistence in College to Satisfaction With Environmental Factors." Journal of Educational Research, LXIII (September, 1969), 6-10.
- SRose, Harriet A. "Prediction and Prevention of Freshman Attrition." Journal of Counseling Psychology, XII (Winter, 1965), 399-403.
- S\_\_\_\_\_ and Charles F. Elton. "Another Look at the College Dropout." Journal of Counseling Psychology, XII (Summer, 1966), 242-245.
- \_\_\_\_\_ and Charles F. Elton. "Attrition and the Vocationally Undecided Student." Journal of Vocational Behavior, I (January, 1971), 99-103.
- Runyon, Richard P. and Audrey Haber. Fundamentals of Behavioral Statistics. Reading, Massachusetts: Addison-Wesley Publishing Company, 1967.
- Schmidt, Du Mont K. and William E. Sedlacek. "Variables Related to University Student Satisfaction." Journal of College Student Personnel, XIII (May, 1972), 233-238.
- XSelby, James E. "Relationships Existing Among Race, Student Financial Aid, and Persistence in College." Journal of College Student Personnel, XIV (January, 1973), 38-40.

- §Sexton, Virginia S. "Factors Contributing to Attrition in College Populations: Twenty-five Years of Research." Journal of General Psychology, LXXII (April, 1965), 301-326.
- Shultz, T. W., editor. Investment in Education: The Equity-Efficiency Quandry. Chicago: University of Chicago Press, 1972.
- §Stanfiel, James D. "Socioeconomic Status as Related to Aptitude, Attrition, and Achievement of College Students." Sociology of Education, XLIV (Fall, 1973), 480-488.
- XStarr, Ann, Ellen L. Betz, and John Menne. "Differences in College Student Satisfaction: Academic Dropouts, Non-Academic Dropouts and Non-Dropouts." Journal of Counseling Psychology, XIX (July, 1972), 318-322.
- §Summerskill, John. "Dropouts from College." In Nevitt Sanford (Editor). The American College. New York: John Wiley and Sons, 1962.
- The Managing and Financing of Colleges. A Statement on National Policy by the Research and Policy Committee of the Committee for Economic Development. New York: Committee for Economic Development, 1973.
- Thorndike, Robert I. and Elizabeth Hagan. Measurement and Evaluation in Psychology and Education. New York: Wiley and Sons, Inc., 1955.
- Tickton, Sidney G. "The Magnitude of American Higher Education in 1980." In Alvin Euric (Editor). Campus 1980. New York: Dell Publishing Company, Inc., 1968.
- Tinto, Vincent. "Dropout from Higher Education: A Theoretical Synthesis of Recent Research." Review of Educational Research, XLV (Winter, 1975), 89-125.
- Trent, James W. and Leland L. Medsker. Beyond High School. San Francisco: Jossey Bass, Inc., 1968.
- United States Department of Health, Education and Welfare. Report on Higher Education (The Newman Report). Washington: United States Government Printing Office, 1971.
- Using the ACT on Campus. Iowa City: American College Testing Program, Inc., 1970.

X Weitz, Henry, Mary Clark, and Ora Jones. "The Relationship Between Choice of Major Field and Performance." Educational and Psychological Measurements, XV (Spring, 1955), 28-38.

X \_\_\_\_\_ and H. Jean Wilkinson. "The Relationship Between Certain Non-Intellective Factors and Academic Success in College." Journal of Counseling Psychology, IV (Spring, 1957), 54-60.

§ Willingham, Warren W. "College Performance of Fraternity Members and Independent Students." Personnel and Guidance Journal, XLI (September, 1962), 29-31.



A P P E N D I X

STUDENT SATISFACTION QUESTIONNAIRE

## STUDENT SATISFACTION QUESTIONNAIRE

Dear Student:

This questionnaire has been developed to gather information that will be used in a research project about college freshmen--how students feel about college and why some of them drop out before they finish a degree program. Be assured that your answers will be used for group comparisons only. Individual responses will not be reported, and you will not be asked to put your name on your answer card.

Thank you in advance for your assistance with this important project.

### MARKING INSTRUCTIONS:

1. Be certain that you have a statement booklet, an answer card, and a lead pencil.
2. Mark all answers on the computer card. As the statement booklets will be used again, you are asked not to write on them.
3. Record your student ID number in the upper left hand corner of the answer card in the space designated for "STUDENT NUMBER."
4. Be sure that the statement number in the booklet corresponds to the number on the answer card as you record your responses.

\* \* \* \* \*

### VITA

Items 1-7 are concerned with basic information about you which is necessary so that the data gathered in this project may be fully interpreted. Any items omitted will limit the usefulness of the results.

1. How old are you?
  - A. Under 18
  - B. 18
  - C. 19
  - D. 20
  - E. Over 20

2. Where are you living now?
  - A. At home with parents
  - B. Residence Hall
  - C. Sorority or fraternity house
  - D. Your own house or apartment, or other residence
  
3. How many hours per week do you spend studying outside class? (Estimate an average.)
  - A. Fewer than 12
  - B. 12-23
  - C. 24-35
  - D. 36-47
  - E. 48 or more
  
4. Are you a member of a fraternity or sorority?
  - A. Yes
  - B. No
  
5. Do you hold an office in your living group or in another organization?
  - A. None
  - B. One
  - C. Two or more
  
6. In how many extra-curricular activities and/or organizations are you involved? (Exclude living group.)
  - A. None
  - B. One
  - C. Two or more
  
7. How many hours per week do you work while in school?
  - A. None
  - B. 10 or fewer
  - C. 11-20
  - D. 21-30
  - E. 31-40

- KEY
- A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory
  - E. No Opinion; Does Not Apply
- 

Indicate how satisfied you are with:

- 8. The opportunity to make close friends here.
- 9. The amount of work required in most classes.
- 10. The way teachers talk to you when you ask for help.
- 11. The competence of most of the teachers in their own fields.
- 12. The amount of study it takes to get a passing grade.
- 13. The chances of getting a comfortable place to live.
- 14. The chance you have of doing well if you work hard.
- 15. The amount of personal attention students get from teachers.
- 16. The chance to be heard when you have a complaint about a grade.
- 17. The friendliness of most students.
- 18. The amount of time you have for activities other than studying.
- 19. The chance to show that students have something worthwhile to offer.
- 20. The help that you can get when you have personal problems.
- 21. The ability of most advisors in helping students develop their course plans.
- 22. The chance to take some courses just because you're interested in them.
- 23. The cleanliness of the housing that is available for students here.
- 24. The chance to take courses that fulfill your goals for personal growth.

## KEY

- A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory
  - E. No Opinion; Does Not Apply
- 

- 25. The kind of things that determine your grade.
- 26. The use of grades as a measure of a student's accomplishment.
- 27. The chance to be recognized when you do something well.
- 28. The preparation students are getting for their future careers.
- 29. The fairness of most of the rules here.
- 30. The chance to have privacy when you want it.
- 31. The chance to work on projects with members of the opposite sex.
- 32. Teachers' expectations as to the amount that students should study.
- 33. The availability of good places to study.
- 34. The fairness of most teachers in assigning grades.
- 35. The interest that most advisors take in the progress of their students.
- 36. The chance to tell the administration what changes you think are needed in the coursework here.
- 37. The places provided for students to relax between classes.
- 38. The social events that are provided for students here.
- 39. Teachers' concern for students' needs and interests.
- 40. The chance of finding someone to help you when you have a problem.
- 41. The chance to get scheduled into the courses of your choice.
- 42. The activities and clubs you can join.

## KEY

- A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory
  - E. No Opinion; Does Not Apply
- 

- 43. The difficulty of most courses.
- 44. The chance to get help to decide what your major should be.
- 45. The chance to get acquainted with other students outside of class.
- 46. The availability of your advisor when you need him.
- 47. The chances to go out and have a good time.
- 48. The chance of getting a grade which reflects the effort you put into studying.
- 49. The chance for a student to feel worthwhile as an individual.
- 50. The quality of education students get here.
- 51. The respect that is shown for the ideas of students.
- 52. The chance to show what you're good at.
- 53. The concern shown here for the comfort of students outside of classes.
- 54. The things you can do to have fun here.
- 55. The extent to which student opinions influence important decisions of the university.
- 56. The chance of having a date here.
- 57. The chances of getting acquainted with teachers in your major area.
- 58. The chance to explore important ideas.
- 59. The quality of the material emphasized in the courses.
- 60. The chance of getting into the courses you want to take.
- 61. The amount of time you must spend studying.

## KEY

- A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory
  - E. No Opinion; Does Not Apply
- 

- 62. The chance to participate in making decisions about school regulations.
- 63. The availability of comfortable places to lounge.
- 64. The chances for men and women to get acquainted.
- 65. The counseling that is provided for students here.
- 66. The chance to prepare well for your vocation.
- 67. The chance to live where you want to.
- 68. The chance for you to have a "fair break" here if you work hard.
- 69. The chance to talk in classes about ideas you think are important
- 70. The extent to which students can influence what courses are offered.
- 71. The chances to meet people with the same interests as you have.
- 72. The chance of being known by name in your classes.
- 73. The choice of dates you have here.
- 74. The amount of study you have to do in order to qualify someday for a job you want.
- 75. The quality of the class lectures.
- 76. The chance to influence school regulations about how students spend their time outside classes.
- 77. The willingness of teachers to talk with students outside of class time.
- 78. The places where you can go just to rest during the day.
- 79. The campus events that are provided for students here.

## KEY

- A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory
  - E. No Opinion; Does Not Apply
- 

- 80. The practice you get in thinking and reasoning.
- 81. Your opportunity here to determine your own pattern of intellectual development.
- 82. The chance to participate in class discussions about the course material.
- 83. The chance of getting a good meal on campus.
- 84. The activities that are provided to help you meet someone you might like to date.
- 85. The sequence of courses and prerequisites for your major.
- 86. The availability of quiet study areas for students.
- 87. The appropriateness of the requirements of your major.
- 88. The opportunity to secure financial assistance from the University.
- 89. Choose one of the following statements which best tells how you feel--overall--about life at OSU. Fill in the appropriate space on your answer card.
  - A. Very Satisfactory
  - B. Somewhat Satisfactory
  - C. Rather Unsatisfactory
  - D. Very Unsatisfactory



VITA 2

Shirley Ann Ross

Candidate for the Degree of  
Doctor of Education

Thesis: FACTORS RELATED TO THE WITHDRAWAL OF FRESHMAN  
STUDENTS AT OKLAHOMA STATE UNIVERSITY

Major Field: Student Personnel and Guidance

Biographical:

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Department of Public Welfare, Oklahoma City,  
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Associate Dean of Student Affairs, Oklahoma State  
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