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A Comparison Study Of Why College Students Make Changes In Their Majors

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A COMPARISON STUDY OF WHY COLLEGE STUDENTS MAKE
CHANGES IN THEIR MAJORS

A Dissertation
Presented to the Graduate Faculty
University of the Pacific

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
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May 1973

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A COMPARISON STUDY OF WHY COLLEGE STUDENTS
MAKE CHANGES IN THEIR MAJORS

Abstract of Dissertation

PURPOSE: The general purpose of this study was to determine why students change their majors in colleges and universities having an enrollment between one thousand and five thousand students. The specific purposes were: (1) to determine if the deans' and advisers' perceptions of why students change their majors at the college level are congruent with the students' perceptions, (2) to determine what colleges are doing to minimize changes in majors, (3) to determine if students were satisfied with their changes in majors, and (4) to determine how many students made changes in their majors.

POPULATION: Using the 1970 Yearbook of Higher Education, a population of thirty institutions in California meeting the enrollment criteria was selected for the study. The population sample of deans was selected from the above-mentioned institutions. The student sample was selected from one public institution, one private nondenominational institution, and one religiously affiliated institution. The adviser sample was taken from the same institutions from which the student population was drawn.

PROCEDURE: Questionnaires were constructed and mailed to the deans, students, and advisers. The questionnaires were accompanied by a cover letter explaining the purposes of the questionnaires. The questionnaires were coded so that non-respondents could be followed up with a post card.

FINDINGS: It was found that fifty-five percent of the student population changed their majors. Thirty-six percent changed once, eleven percent changed twice, and eight percent changed more than twice. The major reasons given by the seniors for changing their majors are as follows: (1) had a change of interest, (2) had greater success in another field, (3) discovered he had unrealistic goals in terms of ability, and (4) felt he had received inadequate counseling.

The reasons given for changing a major were similar for male and female students. The male students did change more often because of unrealistic goals in terms of their ability. The male student also appeared to be more aware of job trends.

The difference between the responses of the younger age group and the older age group were minor. But it was noted that the older students were more likely to have changed majors than the younger students.

The students reporting a change in their majors overwhelmingly perceived this as having a positive effect on their future plans.

The deans of students and the advisers appeared to be quite perceptive in regard to the reasons why students change their majors. The only difference was that they did not rank counseling as important a reason as did the students.

The results of the study indicated that colleges are not minimizing changes in majors. The colleges studied had an orderly procedure to follow to change majors, but the procedure was mainly for record keeping purposes.

CONCLUSIONS: More than half of all students changed their majors before graduating from college. Students should be encouraged to delay declaring a major until they have had adequate time to explore and to learn more about themselves. Possibly a more realistic time schedule would have the students declare a major upon achieving junior status.

RECOMMENDATIONS: Accelerated programs are being advocated and adopted by colleges and universities. A student undergoes considerable change in his four years at college. One must weigh the possibility that the shorter period might not give some students adequate time to develop and mature to their fullest potential. A study to analyze the effects of accelerated programs on students should be undertaken.

The study also showed that some students felt they were not receiving adequate academic counseling and that this was one of the major reasons given for changing majors. Therefore, colleges should develop a program for the training of college advisers in the task of advising students.

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

INTRODUCTION

During the process of attending college, a student selects a program of studies. This program may prepare him for an occupation or a profession, for graduate work, or possibly just to enable him to achieve a personal satisfaction or a sense of achievement within himself. However, in pursuit of these goals college students seem to be influenced by variables which lead them to change their majors. Two researchers found that 61 percent of the college students change their academic objectives.¹

One viewpoint is that the changing of majors by students is wasteful of their time, energy, and money, and by implication of the colleges' time, energy, and money, and therefore, undesirable. The cost of educating our youth is continuing to rise each year as is the number of students attending college.² Methods of decreasing the cost of education and ways of accelerating the movement of students through our institutions are receiving considerable attention in the State of

¹Donald H. Akenson and Russell S. Beecher, "Speculations on Change of College Major," College and University, XLII (Winter, 1967), p. 175.

²The Carnegie Commission on Higher Education, Clark Kerr, Chairman, Less Time, More Options (New York: McGraw-Hill Book Company, 1971), p. 7.

California and throughout the nation.³ The task of developing new methods is being undertaken by the Carnegie Commission of Higher Education under the chairmanship of Clark Kerr.⁴

A second viewpoint is that these changes represent a developmental process whereby one's horizons are broadened. These changes may represent the developing of social conscience.⁵

Greater scrutiny regarding the causes of changes of majors needs to be undertaken. The urgency to seek answers to the issue "Why do college students change their majors?" is both current and relevant to the demands being made on higher educational institutions today. Regardless of one's viewpoint there appears to be a need for better documentation of the subject.

THE PROBLEM

Statement of the Problem

This study will investigate two questions: 1) why do college students change their majors, and; 2) what, if anything, are colleges doing to minimize changes in majors?

Significance and Importance of the Study

The findings of the study may provide information that could assist the educational counselor or adviser with counselees. The lack of research on the topic of "Why do college students change their majors?"

³Ibid., pp. 13-14.

⁴Ibid., pp. 1-32.

⁵Akenson and Beecher, op. cit., p. 180.

indicates the need for empirical data on this topic. Advisers could possibly do a more effective job of advising students if they had available information giving them insight to the dynamics behind the change of majors. It may be that changes are necessary for the developing student as he gets a broader picture of himself in society. And if this is the case, it may be that changes are desirable and to be expected.

Hopefully, this study might provide some insight into the reasons for the changes in majors that could possibly lead to better utilization of the students' and institutions' time, energy, and money. If more students could realize their final plans earlier, the students, as well as the institution, would possibly benefit. The students could achieve their vocational goals sooner and the colleges could feasibly educate more students.⁶ Changes in majors sometimes necessitate the need to stay in college longer which increases the cost of education to the students and to the institutions.

PURPOSES OF THE STUDY

The purposes of the study are to: 1) determine why college students change their majors, 2) determine if these changes are being minimized by colleges and what means are used to minimize them, 3) determine the perception of the Deans of Students and Advisers to the question, "Why do college students change their majors?", and 4) after applying appropriate statistical procedures to the findings, present them in terms of their descriptive and operational implications.

⁶News item in the Stockton Record, November 26, 1970, Sec. II, p. 19, Col. 1.

OBJECTIVES

The following are the generally stated major objectives of the study:

1. To determine what selections the students will make on the question, "Why do college students change their majors?"
2. To determine if a change of major will be perceived by the students as having a positive effect on their future plans.
- *3. To determine how many seniors made changes in their major.
- *4. To determine the deans' perception on the question, "Why do college students change their majors?"
- *5. To determine the advisers' perception on the question, "Why do college students change their majors?"
6. To determine what procedures students must follow in order to change their majors.

ASSUMPTIONS AND LIMITATIONS

Assumption of the Study

The assumptions upon which this study is based follow:

1. The student population is a representative sample.
2. The data gathering techniques and data treatments will be able to answer tentatively the question, "Why do college students change their majors?"
3. While social or economic factors were not included as variables in this study, both may have relevance in regard to the stated problem.
4. Most changes of majors have occurred prior to senior year.

Limitations of the Study

The limitations upon which this study is based follow:

1. Choices of colleges were made from four year colleges

granting A.B. or B.S. degrees in California with enrollments from 1000 to 5000 students. This coincides with the statistical division used by the American Association of Collegiate Registrars and Admission Officers (AACRAO).⁷

2. All junior colleges and colleges with specialized curricula have been eliminated from the study.
3. This study will be limited to the identification of general patterns in changes of majors throughout the selected colleges rather than a detailed comparison of school by school.
4. The limited availability of data from two of the institutions placed restrictions on the study.
5. The limitations inherent in the nature and scope of the instruments constructed for this study placed restrictions on the findings.

DEFINITION OF TERMS

The following terms used in this study are defined below:

Adviser. One who helps students select their course of studies; aids a student in planning his academic program.⁸

Change of Major. For this study, change in major will be interpreted as meaning a change in designated field of interest.

Educational Counselor. His professional roots are teaching; he is doing part-time counseling largely of the educational planning type. He gives information and suggestions primarily. This counselor is frequently called "adviser."⁹

⁷"Patterns of Organization of the Office of Registrar & Admissions," College and University, XLII (Summer, 1967), pp. 550-553.

⁸Kate Hevner Muller, Student Personnel Work in Higher Education (Boston: Houghton Mifflin Company, 1961), p. 210.

⁹Lawrence M. Brammer and Everett L. Shostrom, Therapeutic Psychology (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 12.

Major. Designates the principal course of study that one follows toward a Bachelor degree.¹⁰

Senior. One who has completed at least 90 semester units or their equivalent.¹¹

SUMMARY

The first chapter of this study: 1) provided an introduction to the study, 2) presented the problem and the significance of the problem, 3) proposed objectives, 4) specified the assumptions and limitations on which the research is based, and 5) defined the important terms utilized in the study.

Four additional chapters complete the study. They are as follows: 1) Chapter II: Review of the Literature Related to the Study, 2) Chapter III: Description of the Procedures and Design of the Study, 3) Chapter IV: Presentation of the Collected Data as Revealed by the Investigation, and 4) Chapter V: Summary, Recommendations, and Conclusions.

¹⁰Clarence L. Barnhard, (ed.), The American College Dictionary (New York: Random House, 1955), p. 735.

¹¹University of the Pacific Bulletin, LVI (April, 1968), pp. 10-11.

CHAPTER II

REVIEW OF THE LITERATURE RELATED TO THE STUDY

The chapter will be treated in four parts: (1) Occupational choice, (2) Changes in majors, (3) Satisfaction with choice of major, and (4) Effects of higher education. While the literature had much to offer areas 1, 3, and 4, it was noted that research on changes in majors (area 2) was extremely limited. ??

OCCUPATIONAL CHOICE

Sparling states that the typical student chooses his vocation at the age of sixteen.¹ Davis reports that the last two years of high school are the most strategic period of all for vocational choice.²

Snelling and Boruch on a longitudinal study of science majors in forty-nine private colleges during the decade of 1958-1967 found between fifty percent and sixty percent of all graduates in this study stated that science was selected as their major field of study during their elementary school years or during the first year of secondary education. Women were found to make a decision at a later stage in their development than men.³ Choice of a particular field of science usually

¹Edward J. Sparling, Do College Students Choose Vocations Wisely? (New York City: Bureau of Publications, 1933), p. 39.

²James Davis, Undergraduate Career Decisions (Chicago: Aldine Publishing Company, 1965), p. 33.

* ³W. Rodman Snelling and Robert F. Boruch, Science in Liberal Arts Colleges (New York: Columbia University Press, 1972), pp. 2-7.

occurred during the college years.⁴

Heston reports from information based on college student questionnaire data from 307 American colleges and universities for 1966-1967 school year that "70 percent of the men and 80 percent of the women made their decision on a major more than a year previous to entering college."⁵ Another researcher's study suggests that predictions made by freshmen in regard to choice of major field were as efficient as actuarial predictions based upon achievement test data or interest test data. The researcher states that greater credence should be placed on student self-predictions rather than turning to interest inventories.⁶

Thus it would appear that the authors reviewed in this section have indicated from their research that vocational choices are made as early as age sixteen and particularly during the last two years of high school. It also appears that student self-predictions regarding vocational choice or college major are as reliable as actuarial predictions based upon achievement test data or interest test data.

CHANGES IN MAJORS

Sparling reported in 1933 that sixty-five percent of the students changed their vocation before graduation from college. He stated the

⁴Ibid., pp. 42-43.

⁵Lawrence Riggs, "Extent of the Problem," Counseling for the Liberal Arts Campus, eds. Joseph Heston and Willard Frick (Yellow Springs, Ohio: The Antioch Press, 1968), pp. 90-91. The information is based on an unpublished report.

⁶Robert F. Stahmann, "Predicting Graduation Major Field from Freshman Entrance Data," Journal of Counseling Psychology, XVI (March, 1969), pp. 109-113.

main reason for this change was because of the students' failure in subjects prerequisite for the vocation chosen.⁷

Studies by Rosenberg and Iffert suggest that fifty percent of the students in some majors are likely to change their occupational objectives prior to receiving the bachelors degree.⁸ They found students leaving the fields of mathematics, biology, and chemistry more often than those who had entered such fields as engineering and medicine.

In a study by Anderson of three thousand entering junior college students, he reports that nearly sixty percent changed their vocational goals by the end of their sophomore year. He states that the typical student would be just as satisfied in any one of three or four occupations, and that the student should not be unduly concerned if he cannot arrive at a decision during his first two years of college.⁹

In 1961 a study by Davis from a large sample representing many colleges and universities investigated this question, "How much change do we find between the freshman and senior years?"¹⁰ The results of the study would suggest that around fifty percent of the students report a career shift during college.¹¹

The fairest conclusion perhaps is that college students maintain a constant orientation toward the professions and white collar jobs, but within this limited part of the world of occupations they show rather high rates of shifting during college.¹²

⁷Sparling, loc. cit.

⁸Morris Rosenberg, Occupations and Values (Glencoe, Illinois: The Free Press, 1957), pp. 72-92.

⁹Bert D. Anderson, Introduction to College (New York: Holt, Rinehart and Winston, Inc., 1969), pp. 35-36.

¹⁰Davis, op. cit., p. 13. ¹¹Ibid., p. 14.

¹²Ibid.

Davis reports that education and business are better able to retain students who initially enrolled in the fields; whereas, the arts, sciences, medicine, and engineering do not. The recruitment of new students to these same fields coincides with the holding power of each.¹³ Davis hypothesizes that the loss of students from the sciences might represent a reaction to society and to high schools for putting such heavy emphasis on science and technology.¹⁴

A study by Akenson and Beecher on the Harvard College graduating class of 1965 revealed that sixty-one percent of the students investigated had "changed their plans."¹⁵ They hypothesized that "the fundamental difference between high school and college curricula is largely responsible for the direction of the change."¹⁶ The high school curriculum has placed emphasis on English, mathematics, history and science. And latest curriculum changes at the high school level have been in the area of the natural sciences. At the same time the college curricula offers courses considered more relevant by students, such as, government, social relations, economics, anthropology, architecture, and sciences. The college freshman students register in courses with traditional high school names then later they select different fields. In addition to this finding, Akenson and Beecher hypothesized that a growing interest in the social service occupations such as the Peace Corps accounted for a certain

¹³Ibid., pp. 19-22.

¹⁴Ibid., p. 34.

¹⁵Donald H. Akenson and Russel S. Beecher, "Speculations on Change of College Major," *College and University* XLII (Winter, 1967), p. 178.

¹⁶Ibid.

percentage of changes.¹⁷

Heston's research seems to demonstrate that initial choices among science and social science majors are not very stable. He reported that it required one hundred forty-two freshmen majoring in science to produce one hundred graduates of science with no allowance for any student attrition from college. And he discovered that it required only fifty-nine freshmen expressing an interest in social science to predict one hundred social science graduates at Albion. Similar results were reported at DePauw University.¹⁸

Paul Heist of the Center for Research and Development in Higher Education at Berkeley, California, found that the bright, creative students many times left the colleges of their original choice. They particularly left the field of science education for the liberal arts.¹⁹

Astin and Panos assessed the student's career preference and field of study at the time of entering college and four years later at the expected time of graduation from college.²⁰ Their data clearly show that the student's selection of a career at the time he enters college "typically" changes by the time of graduation. Nursing and teaching were found to have the greatest holding power; they managed to hold as many as half the students initially choosing them. Astin and Panos mentioned:

¹⁷Ibid., p. 179.

¹⁸Heston and Frick (eds.), loc. cit.

* → ¹⁹Paul Heist, "Creative Students: College Transients," The Creative College Student, ed. Paul Heist (San Francisco: Jossey-Bass Inc., 1968), pp. 35-55.

* ²⁰Alexander W. Astin and Robert J. Panos, The Educational and Vocational Development of College Students (Washington D.C.: American Council on Education, 1969), pp. 85-141.

"Although there is no obvious relationship between type of career and degree of stability; but the more popular careers tended to be more stable over time than did the less popular."²¹ Two exceptions to this trend were the career choices of engineer and physician which suffered heavy losses. The authors did not suggest any reasons for the attrition.

In the same study it was observed that businessman, housewife, and college professor were the careers that had the largest net gains over time. It is interesting to note that the largest net losses occurred in the three career groupings that are most closely related with mathematics and science: natural scientist, engineer, and physician or dentist. The Astin and Pano's study and the Davis's study are in agreement with respect to the relative stability of the various careers.

One could infer from the studies of Davis and Astin and Panos that there is a movement from the more difficult fields to the less difficult. Although Astin and Panos would not disagree with the above statement, they believe that high academic standards are not the only explanation. They believe that certain rigidities in the curricula may be partly to blame. The careers that register the greatest losses are those that prescribe a large number of specific introductory and prerequisite courses for admission to each higher level of study. By contrast, those careers showing the largest gains of students often accept students without requiring an elaborate background of related courses. Consequently, while courses in mathematics and sciences do not necessarily handicap the student who wishes to become a lawyer or a

²¹Ibid., pp. 85-86.

businessman, courses other than mathematics or science are of little use to the student who wishes to become an engineer, a doctor, or a scientist.²²

Further, Astin and Panos suggest that changes in major field and career choice were not random or haphazard. The changes occurred most often between related fields; for example, with a salesman changing to a business executive and a psychologist to a physician. A student also is more likely to maintain his initial selection of a given career or to shift from some other selection into that career if a relatively high percentage of his peers also choose the same career. In Snelling and Boruch's study of science majors, the chairmen of science departments indicate the following as being the major causes of transfers of science majors to other fields: (1) lack of mathematical competence, (2) student's general inability to comprehend advanced theories, and (3) the greater excitement and personal challenge offered by other fields.²³

In summary, the researchers demonstrated that between fifty and sixty-five percent of the students changed their majors and vocational goals before graduating from college. Akenson and Beecher stated that the fundamental difference between high school and college curricula is largely responsible for changes in majors. Whereas, Davis, Astin and Panos, and Snelling and Boruch would contribute much of the change to a movement from the more difficult fields to the less difficult. Heist revealed that the creative students many times left the college of their original choice seeking a liberal arts curriculum.

²²Ibid., pp. 85-141.

²³Snelling and Boruch, op. cit., pp. 76-78.

The researchers suggest that nursing and teaching are two of the more stable career selections; whereas, the sciences were the less stable career choices. The more popular careers tended to be more stable careers excluding engineering and medicine.

SATISFACTION WITH CHOICE OF MAJOR

Following is a discussion of some of the findings of the Rochester and McBride study.²⁴ They report that many universities demanded that their students select a major prior to the end of the first semester of their junior year. The authors also stated that "an examination of college applications indicates that many schools ask for a selected major at the time of entrance."²⁵ These researchers wished to determine whether the students were satisfied with their selection of a major at a later date in their program.

The study was conducted on seniors attending Southern Illinois University, Edwardsville Campus. The sample population consisted of 483 students, 196 males and 277 females. The majority of the students were within the age range of twenty to twenty-four.

Ninety-one percent of the students indicated they were satisfied with the major for which they were registered during their senior year. Seven percent of the seniors indicated dissatisfaction with their major.

The students also were requested to indicate if they would change their majors if the date of graduation was unaffected. Fifteen percent replied that they would.

²⁴Dean E. Rochester and John J. McBride, "An Investigation of Seniors' Satisfaction with Majors," College and University XLVI (Fall, 1970), pp. 54-60.

²⁵Ibid., p. 54.

In response to the question regarding who helped the students in the choice of major, the researchers reported that thirty-eight percent of the students chose their own major and fourteen percent of the students were influenced by a college teacher. Only four percent of the students indicated their parents influence their selection of a major.

Finally Rochester and McBride asked the students the number of times they changed their major. Fifty-three percent indicated they had changed their majors at least once, nineteen percent indicated they had changed their majors at least twice, and ten percent indicated they had changed their majors three times.²⁶ The percentages these researchers report for number of changes in majors are higher than the percentages reported by other researchers.

Rosenberg in his study of students at Cornell University in the early 1950's came to the following conclusions:

. . . in those fields requiring extensive specialized training, in which this training is started at the undergraduate level, we find the smallest amount of occupational turnover; in those fields requiring specialized training, in which the official formal training has not started at the undergraduate level but in which some preparation may be under way, the amount of turnover is somewhat higher; and in those fields requiring relatively little specialized training, the amount of turnover is highest.²⁷

His explanation for this is that the cumulation of specialized courses enhances one's involvement in a field and also produces an investment in energy and time which the individual may be reluctant to discard.²⁸

²⁶Ibid., pp. 54-60.

²⁷Rosenberg, op. cit., p. 65.

²⁸Ibid.

Rosenberg also found that people were less inclined to change occupations and majors in college if their occupation choice was in "harmony" with their values. For example, if a person was "people oriented," he would be more likely to stay in teaching than one who was not.²⁹

In summary Rochester and McBride study demonstrated that a majority of the students changed their major while attending college and that ninety-one percent of the students were satisfied with their major upon reaching their senior year. The study also showed that most students selected their own major. Next, college teachers had the greatest influence on students' selection of a major followed by high school teachers. Rosenberg found that fields requiring the highest degree of specialization early in one's college career had the greatest holding power. He also reported that one is less likely to change his occupational choice and college major if his values are in "harmony" with his occupation choice.

EFFECTS OF HIGHER EDUCATION

Astin and Panos make brief reference to the environmental effects by type of institution.³⁰ They state that the major influence of the large universities is twofold: to increase the chances of students dropping out of college and to lower his educational aspirations. There is also a tendency for universities to stimulate students' interest in business and law and not to arouse students' interest in teaching. Astin and Panos attribute this pattern to the lack of student-faculty involvement

²⁹Ibid., pp. 78-79.

³⁰Astin and Panos, op. cit., pp. 141-145.

in class, the relative lack of concern for the individual student that occurs in most universities, and the rather impersonal relationship between instructors and students.

They noted, "The pattern of effects observed for the liberal arts college is the converse of the pattern observed for the universities."³¹ The dropout rates are substantially lower and the liberal arts colleges increase the students' interest in obtaining an advanced degree. The liberal arts colleges tend to interest students in the arts, humanities, and the social studies, and to channel students out of majors in business, engineering, and education. Astin and Panos attribute the difference between the universities and liberal arts colleges to the students' greater familiarity with the instructor and the concern shown to individual students in the liberal arts colleges.

Other findings of these authors are that the technological institutions have a positive influence on the students' choice of their major field; they lead students out of potential careers in law, business and medicine.

Teachers colleges increase the students' interest in majoring in education. They have a tendency to deflect students from potential careers in business and from majors in the arts and the humanities.

Students attending technological institutions and teachers colleges are less likely to change majors which might be explained by the selective curricula offerings at each as compared to the universities and liberal arts colleges. Also the technological institutions and teachers colleges are less likely to encourage and support change because of the

³¹Ibid., p. 142.

highly homogeneous interest of both students and faculties.

Astin and Panos compared the effects of type of institutional control by dividing the sample into four subgroups: public, private-nonsectarian, Roman Catholic, and Protestant. The most distinctive pattern was observed in the public institutions. Those students have a higher dropping out rate and have a decreased interest in attending graduate school.³² The public institutions tend to decrease students' interest in the arts and humanities and increase their interest in business and education.

The researchers summarized the analyses of differential college effects on the students' educational and career development. The characteristics are as follows:

1. **Selectivity:** Institutions that are very selective in choosing exceptionally able students tend to have a positive effect on the student's persistence in college and also on his intention to go to graduate school and to obtain an advanced degree. Also, the very selective institutions tend to shift students away from majors in business, education, engineering, and physical sciences and away from careers in teaching and medicine; they attract them to majors in the social sciences, arts, and humanities.
2. **Organized Dating:** This includes institutions where there is a lot of prearranged dating among students. Organized dating tends to shift students away from careers in college teaching and in biological sciences and into careers in engineering and business. It also has a negative influence on the students' interest in obtaining an advanced degree.
3. **Independence:** Institutions where the students have a degree of independence (defined primarily in terms of proneness toward protest and verbal aggressiveness) tend to steer the students away from potential careers in physical science, business, and teaching and into the fields of humanities and arts.
4. **Cohesiveness:** The cohesiveness of the peer environment

³²Ibid., p. 143.

(measured in terms of the number of fellow students whom the student regards as close friends) has a positive effect on persistence in college.³³

Webster, Freedman, and Heist report that during the college years three kinds of changes occur.³⁴ First, a student acquires more information on different subjects and becomes more proficient at performing certain tasks. Secondly, there are changes in attitudes and interests toward the world and the self. And, in some cases, there are changes in personality, accompanied by the emergence of new values.

The authors expressed the opinion that the acquisition of skills and information is the change most generally expected of college students by our culture. This growth is generally measured by the institutions through the granting of grades and diplomas, although the authors feel that grades are an inadequate measurement of educational growth.

Webster, Freedman, and Heist state that there are considerable differences among individuals in their ability to learn and in the rate at which their abilities mature. They report, "Some individuals will fail to gain beyond age 18; many will continue to gain after age 21."³⁵ Persons of higher ability can expect in the future a greater increase in ability than can persons of lower ability. Also change in personality is likely to be greater than average in the higher ability student; therefore, the need for increased guidance tailored to his needs.

The authors also report considerable changes in values and attitudes occur in the students during the college years. Today's students

³³Ibid., pp. 141-146.

³⁴Harold Webster, Mervin Freedman, and Paul Heist, "Personality Change in College Students," College and Character, ed. Nevitt Sanford (New York: John Wiley & Sons, Inc., 1964), pp. 233-242.

³⁵Ibid., p. 234.

"... become more liberal in the sense of being more sophisticated and independent in their thinking, and placing greater value on individual freedom and well-being."³⁶

The study of National Merit Scholars by the Center for the Study of Higher Education, University of California, Berkeley, demonstrated a marked change in religious attitudes over three years of college. The need for religious faith was felt less and less.

The study of National Merit Scholars also supports the fact that students become more liberal politically during college. After two years many of the students had changed their political party preference. There was a high incidence of men changing to the Democratic party and of women to parties loosely designated as "independent." The Republican Party suffered severe losses.

The results of a study at Vassar College seem to indicate that college leads students in the direction of increased tolerance for individual differences, less conservatism, and more freedom to express impulses.³⁷

Feldman and Newcomb lend credence to the study at Vassar College.³⁸ They are of the opinion that the following characteristics have emerged at nearly all American colleges. There are increases in "openmindedness," decreasing conservatism in regard to public issues, and growing sensitivity to "inner" and aesthetic experiences. In addition, students show an

³⁶Ibid., p. 237.

³⁷Ibid., pp. 233-242, (National Merit Scholars and Vassar College Studies were investigated by Webster and et al.).

³⁸Kenneth A. Feldman and Theodore M. Newcomb, The Impact of College on Students (San Francisco: Jossey-Bass Inc., 1970), p. 48.

increase in intellectual interests and capacities, declining commitment to religion, and increases in dominance, independence, and confidence in readiness to express impulses.

In summary, difficulty of course work, size of institution, peer cohesiveness, and selectivity of institution are some of the reasons given for changes in majors. Also during four years of college, a student becomes more mature, more tolerant, less conservative, and more open to his impulses; all of which would presumably influence his selection of a major. By the time most students reach their senior year, they have selected an appropriate vocation and major that have possibilities for satisfying them. It would seem that changes in vocational plans parallel changes in majors.

In Chapter II the literature has been reviewed in four sections: (1) Occupational Choice, (2) Changes in Majors, (3) Satisfaction with Choice of Major, and (4) Effects of Higher Education. A general overview of this chapter would indicate that selections of vocations are made at an early age but these selections are very unstable. More than fifty percent will change their vocation and major before graduating from college. Some will change majors as many as five times. But ninety-one percent appear satisfied with their choice upon reaching their senior year in college. It appears that during four years of college that students become more mature and, therefore, more decisive about their vocational choices.

In Chapter III, the following topics will be developed: (1) selection of the population, (2) the test instruments which were developed for the study, (3) the procedure for collecting data, (4) the hypotheses of the study, and (5) the research design used for the interpretation and statistical analysis of the data collected.

CHAPTER III

DESCRIPTION OF THE PROCEDURES AND DESIGN OF THE STUDY

In order to collect data concerning the reasons why students change their majors, the study was developed as described in this chapter. The procedures of the study will be delineated and the research design will be developed in this chapter.

POPULATION SELECTION PROCEDURES

The sample was selected from four-year colleges granting Bachelor degrees in California with enrollments from 1000 to 5000. The Yearbook of Higher Education 1970 was the statistical source of information.¹ A total of thirty colleges fell into the above category. The Deans of Students or their functional equivalents were selected from these thirty colleges.

The student sample was selected from one public institution, one private nondenominational institution, and one religious affiliated institution: Stanislaus State College, University of the Pacific, and Pacific Union College, respectively. The sample consisted of 330 seniors whose names were obtained from the Student Directory of Stanislaus State College, 656 seniors whose names were obtained from the Student Directory of

¹Alvin Renetzky and Jon S. Greene (eds.), Yearbook of Higher Education 1970 (Los Angeles: Academic Media, 1970), pp. 24-55.

University of the Pacific, and 294 seniors whose names were provided by the Admissions and Records Office of Pacific Union College. Pacific Union College provided a computerized list of seniors. The other two institutions provided student directories.

The sample of advisers was obtained through the use of a table of random numbers. At Pacific Union College all faculty members are advisers. Therefore, the current college catalog was used to obtain the adviser population. The population was numbered starting with one and proceeding forward until the total population was numbered. A table of random numbers was applied to the population to select thirty advisers. The same procedure was used to select thirty advisers from Stanislaus State College.

The Dean of Students provided a list of advisers at University of the Pacific. The advisers were numbered and a table of random numbers was used to select thirty advisers. A total of ninety advisers made up the final sample; thirty from each institution.

DEVELOPED INSTRUMENTS

The instruments consisted of three questionnaires developed by the examiner. They were designed to elicit responses to the question: "Why do students change their majors at the college level?"

Suggestions for questions for the questionnaire were first obtained from school psychologists, counselors, and students. The component questions were then discussed and revised, in consultation with the investigator's dissertation committee, and the final wording agreed upon.

Students' Questionnaire

The students' questionnaire contained five parts. Part I of the

questionnaire was for identification purposes: name of institution, age, sex, and current major. In addition, the questionnaire asked the students if they had continuously gone to college and if they had transferred from a junior college. If they had transferred to their present college, the questionnaire inquired if it was because the students' current college offered a better opportunity to pursue their major.²

On Part II of the questionnaire the students were to indicate whether they had ever changed majors or not and to list prior majors in chronological order.

Part III requested the students to rank the reasons they had for changing a major. The ten statements in Part III of the questionnaire are as follows:

1. You were able to achieve your goal to work (earn money) quicker in another field.
2. You discovered that you had unrealistic goals in terms of your ability.
3. You did not have the money to pursue your original major.
4. You realized that job demands have changed; you have a better chance of getting a job in another field.
5. You have had greater success in another field.
6. You personally disliked the staff in a particular field.
7. The college forced you to make a decision too soon.
8. You were pressured into taking a major by your parents.
9. You feel that you have received inadequate counseling.
10. You had a change of interest.

In order to account for any other reason(s) not covered in the

²A sample of the Students' questionnaire is in Appendix A, pp. 86-87.

above list an additional item was included. It was labeled "Other reason(s)" and became Item 11 on Part III of the questionnaire.

Part IV requested the students to respond to whether or not the change in a major has been satisfactory. Part V requested the students to indicate how changes in major were processed at their institution.³

Deans' Questionnaire

The deans' questionnaire contained five parts. Parts I and II requested name and title of person filling out the questionnaire. Part III paralleled Part III of the students' questionnaire. The deans were requested to rank the reasons they believe students have for making changes in their majors.⁴

Part IV requested information as to whether or not any one office kept a tally of the number of changes students make in majors. Part V asked, "What steps is your institution taking to minimize or eliminate changes in majors?"

Advisers' Questionnaire

The advisers' questionnaire contained three parts. Parts I and II asked the name of the participating institution and the academic field of the person filling out the questionnaire. Part III was identical to Part III of the deans' questionnaire.⁵

³Parts IV and V of the students' questionnaire are in Appendix A, p. 87.

⁴A sample of the deans' questionnaire is in Appendix A, pp. 89-90.

⁵A sample of the advisers' questionnaire is in Appendix A, p. 92.

DATA COLLECTION PROCEDURE

The questionnaires were first mailed to the deans. A cover letter explaining the purpose of the questionnaire was attached to each one. The cover letter was sent under the letter heading of University of the Pacific, Laboratory for Educational Research. Dr. Marvin E. Locke, Assistant Director, signed the letter.⁶ The questionnaires were mailed in October, 1971.

Students' questionnaires were mailed in October, 1971, to Stanislaus State College students, in December, 1971, to Pacific Union College students, and in January, 1972, to University of the Pacific students. The questionnaires were accompanied by a cover letter, similar to the deans', explaining the purpose of the questionnaire.⁷

The questionnaires to Pacific Union College students and to University of the Pacific students were coded by numbering them in consecutive order starting with the number one. This made it possible to follow up with a post card to the students who did not respond to the questionnaire.

The questionnaires to the advisers were mailed in February, 1972. Similarly, as to the deans and to the students, each questionnaire was accompanied by a letter explaining the purpose of the questionnaire.⁸ The questionnaires were coded for the purpose of following up with a post card to the advisers who did not return their questionnaires.

⁶A sample of the cover letter is in Appendix A, p.88.

⁷A sample of the cover letter is in Appendix A, p. 85.

⁸A sample of the cover letter is in Appendix A, p.91.

INTRODUCTION TO THE HYPOTHESES

After researching the literature, one could conclude that there is a minimum of information on the subject, "Why Do College Students Change Their Majors?" with a noted absence of empirical data. The following hypotheses have been developed which might possibly answer pertinent questions regarding the topic, "Why Do College Students Change Their Majors?" The hypotheses have been categorized into two groups: descriptive hypotheses and null operational hypotheses which can be treated statistically.

DESCRIPTIVE HYPOTHESES

The following are the stated descriptive hypotheses of the study:

Hypotheses

1. To determine what selections the students will make on the question, "Why do college students change their majors?" as reported in Part III of the students' questionnaire.

Subhypotheses

- A. To determine what selections the female students will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.
 - B. To determine what selections the male students will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.
 - C. To determine what selections the students at the different age levels will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.
2. To determine the deans' perception on the question, "Why do college students change their majors?" as reported in Part III on the deans' questionnaire.

3. To determine the advisers' perception on the question, "Why do college students change their majors?" as reported in Part III on the advisers' questionnaire.
4. To determine what procedures students must follow in order to change their major.

NULL OPERATIONAL HYPOTHESES

The following are the stated null operational hypotheses of the study:

Hypotheses

1. To determine how many seniors made changes in their major as reported by Part II of the students' questionnaire.

Subhypotheses

- A. To determine if a similar number of males and females made changes in their major.
- B. To determine if a similar number of 18 to 22 years old students and 23 years and older students make changes in their majors.
2. To determine if a change of major will be perceived by the students as having a positive effect on their future plans.
 - C. To determine if a change of major will have a positive effect on the future plans of both males and females.
 - D. To determine if a change of major will have a positive effect on the future plans of both 18 to 22 year old students and 23 years and older students.

THE RESEARCH DESIGN

Each descriptive hypothesis will be subjected to a frequency distribution for all items on the questionnaire where this procedure is appropriate. Inferences relating to the hypotheses will be made after frequency distributions have been ranked and percentages found.

The null operational hypotheses will be restated in Chapter IV

in null form so that they can be accepted or rejected. Where each is appropriate the statistical test to be used are the binomial and chi square. From these findings inferences will be made relating to the null hypotheses. For further illumination some of the hypotheses were treated descriptively and illustrated in tables.

SUMMARY

Chapter III has been developed and described in five sections: (1) selection of the population, (2) the test instruments which were developed for the study, (3) the procedure for collecting the data, (4) the hypotheses to be explored and tested, and (5) the research design used for the analysis of the data collected and related interpretation.

In Chapter IV, the collected data will be presented as revealed by the investigation.

CHAPTER IV

PRESENTATION OF THE COLLECTED DATA AS REVEALED BY THE INVESTIGATION

INTRODUCTION

As proposed in the initial chapter, the primary purpose of this study was twofold: 1) to investigate why college students change their majors, and; 2) to investigate what, if anything, colleges are doing to minimize changes in majors.

The answers to the above questions were sought through the use of certain questionnaires designed to obtain information on the areas above. Table 1 illustrates the percentage comparison of questionnaires returned from the three colleges.

Table 1
Percentage Comparison of Questionnaires Returned

Institution	Questionnaires Mailed	Questionnaires Returned	Percent Returned
Pacific Union College	294	228	74%
Stanislaus State College	330	183	55
University of the Pacific	656	353	54
Total	1280	764	60%

In this chapter the hypotheses introduced in Chapter III will be presented. Accompanying tables will attempt to illuminate the data. Where possible, each hypothesis and its datum will be discussed in relation to findings of the literature as reported in Chapter II.

The first seven hypotheses are those designated as Descriptive Hypotheses. Following these are six hypotheses designated as Operational Hypotheses which in this chapter will be stated in the null form so that they can be accepted or rejected based on the findings indicating significance or nonsignificance.

Parts I and V of the students' questionnaire and Parts IV and V of the deans' questionnaire will be discussed separately as they were not proposed as representing either a descriptive or null hypothesis.

DESCRIPTIVE HYPOTHESES

Hypothesis One

To determine what selections the students will make on the question, "Why do college students change their majors?" as reported in Part III of the students' questionnaire.¹

On the questionnaire the senior students were requested to rank only those items applying to themselves. Therefore, the percentages of the most frequently chosen items remain low.

The student responses to those items most frequently chosen are discussed below. Table 2 illustrates the ranking of each item from first to eleventh inclusively.

Of the eleven items students could respond to, those most

¹A sample of the students' questionnaire is in the Appendix A, pp. 86-87.

Table 2

The Rankings and Percentages of All the Senior Students Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	32* 4.18%**	23 3.01%	7 .91%	15 1.96%	11 1.43%	7 .91%	5 .65%	5 .65%	5 .65%		
b.	53 6.93	37 4.84	17 2.52	18 2.35	10 1.30	8 1.04	4 .52	4 .52	3 .39	1 .13%	
c.	10 1.30	5 .65	10 1.30	7 .91	11 1.43	14 1.83	7 .91	6 .78	3 .39	2 .26	2 .26%
d.	22 2.87	36 4.71	34 4.45	20 2.61	6 .78	5 .65	7 .91	1 .13	1 .13	1 .13	2 .26
e.	37 4.84	71 9.29	48 6.28	19 2.48	15 1.96	4 .52	3 .39	2 .26			
f.	24 3.14	22 2.87	23 3.01	18 2.35	14 1.83	10 1.30	2 .26	2 .26	1 .13	6 .78	
g.	11 1.43	15 1.96	15 1.96	10 1.30	6 .78	8 1.04	5 .65	6 .78	15 1.96	5 .65	1 .13
h.	13 1.70	14 1.83	9 1.17	5 .65	5 .65	2 .26	1 .13	7 .91	9 1.17	19 2.48	2 .26
i.	27 3.53	30 3.92	33 4.31	19 2.48	13 1.70	10 1.30	5 .65	11 1.43	5 .65	2 .26	
j.	100 13.08	69 9.03	48 6.28	26 3.40	12 1.57	3 .39	12 1.57	5 .65	3 .39	3 .39	
k.	92 12.04	22 2.87	13 1.70	7 .91	4 .52	1 .13	1 .13				

*Number of students selecting this item

**Percentage based on N = 764

frequently selected under Rank 1 (first choice) were Items j) You had a change of interest (13%), k) Other reason(s) (12%), and b) You discovered that you had unrealistic goals in terms of your ability (7%). Item b was selected by approximately half as many students as Items j and k, but it remained clearly a more frequently chosen item than the remaining items. The two items receiving the least choices were Items c) You did not have the money to pursue your original major (1%), and h) You were pressured into taking a major by your parents (1%).

The four responses chosen most frequently under Rank 2 (second choice) were Items e) You have had greater success in another field (9%), j) You had a change of interest (9%), b) You discovered you had unrealistic goals in terms of your ability (5%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (5%). The two items receiving the least choices were Items h) You were pressured into taking a major by your parents (2%), and c) You did not have the money to pursue your original major (1%).

The responses chosen most frequently under Rank 3 (third choice) were Items j) You had a change of interest (6%), e) You have had greater success in another field (6%), d) You realized that job demands have changed; you have a better chance of getting a job in another field (4%), and i) You feel that you have received inadequate counseling (4%). The two items receiving the least choices were Items a) You were able to achieve your goal to work (earn money) quicker in another field (1%), and h) You were pressured into taking a major by your parents (1%).

The Rank 1 reason for a change in a major selected most often was Item j) You had a change of interest (13%). This choice is supported by Akenson and Beecher who believe that during the college years one goes

through a developmental process whereby one's horizons are broadened and the growth of a social conscience occurs.² The authors also stated that a difference in high school and college curricula is responsible for some of the change made by college students. The college freshman students register in courses with traditional high school names, then later they select different fields which are more relevant to them.³

Feldman and Newcomb report that the following characteristics emerged in many students attending college: an increase in "openmindedness," a decrease in conservatism in regard to public issues, and an increase in sensitivity to "inner" and aesthetic experience. In addition students show an increase in intellectual interests and capacities, declining commitment to religion, and increase in dominance, independence, and confidence in readiness to express impulses.⁴

The literature and research data are congruent in that a "change of interest" does take place during one's attendance at college. Collegiate institutions appear to have a dynamic rather than a static influence on students.

Item k) Other reason(s) (12%), was given the second highest ranking. The reasons given were highly individualized and only a few of the items could be categorized. Table 3 will give those reasons listed most often. Some examples of reasons appearing only once are: 1) going to

²Donald H. Akenson and Russel S. Beecher, "Speculations on Change of College Major," College and University XLII (Winter, 1967), p. 180.

³Ibid., p. 179.

⁴Kenneth A. Feldman and Theodore M. Newcomb, The Impact of College on Students (San Francisco: Jossey-Bass Inc., 1970), p. 48.

Table 3
 Item k, "Other Reason(s)," Given Most Often

Number of Times	Reason Given
10	Junior college major not accepted or offered in a four year institution
8	Influenced by the discovery of religion (God)
4	Needed academic major to obtain teaching credential
3	Low grades
3	Spent a year in a foreign country and changed to a foreign language major
3	Wanted to go into teaching
2	✓ Influenced by work experience
2	Going to be drafted so selected major that was easiest to obtain
2	Personality not suited for major
2	Decided that career (major) and having a family not compatible
2	Changed because of athletic ability
2	Major required a foreign language
2	Hated teaching
2	Disliked major

get married, 2) lacked confidence in ability, 3) major takes too much time, 4) "petty" education courses, 5) college listed wrong major, 6) disliked killing animals, and 7) not able to meet requirements of major as a part time student.

It is interesting to note on Table 3 that the ten students who mentioned that they had to change majors because the four year college would not accept their junior college majors were from Stanislaus State College. The eight students who mentioned the influence of religion were from Pacific Union College.

The third highest selection was Item b) You discovered that you had unrealistic goals in terms of your ability. This position appears to be well documented by the studies of Davis, and Astin and Panos who report a movement from the more difficult fields to the less difficult, a view also supported by Snelling and Boruch.⁵

The choices ranked second differed little from those ranked first. Items e) You have had greater success in another field (9%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (5%), were added to the choices selected most frequently. Other reason(s), (Item k --3%), was dropped. As previously mentioned college provides opportunity for students to explore and broaden their horizons. Item d demonstrates that some of the college students are cognizant of the field of work.

⁵James Davis, Undergraduate Career Decisions (Chicago: Aldine Publishing Company, 1965), pp. 19-34; Alexander W. Astin and Robert J. Panos, The Educational and Vocational Development of College Students (Washington, D.C.: American Council on Education, 1969), pp. 85-141; see also W. Rodman Snelling and Robert F. Boruch, Science in Liberal Arts Colleges (New York: Columbia University Press, 1972), pp. 76-78.

Item i) You feel that you have received inadequate counseling (4%), appeared for the first time among the items most frequently chosen under third choice. Students were not asked to explain what they meant when checking this item. The content of the questionnaire would suggest that the students were referring to assistance in selecting classes and appropriate majors.

In order to see all eleven items ranked from most chosen to least chosen, it was decided to present these data in Table 4 showing the cumulative percentages of the items. The items are placed in descending order.

Looking at Table 4, one can notice that Items j) You had a change of interest (37%), e) You have had greater success in another field (26%), continued to rank as the top two reasons for making changes in majors. Whereas, Items c) You did not have the money to pursue your original major (10%), and h) You were pressured into taking a major by your parents (11%), continued to rank as the reasons least frequently given by students for changes in majors. An earlier study by Rochester and McBride showed that only four percent of the students' parents influenced their selection of a major.⁶ This study appears to substantiate their findings.

Subhypothesis A

To determine what selections the female students will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.

The female student responses to those items most frequently

⁶Dean E. Rochester and John J. McBride, "An Investigation of Seniors' Satisfaction with Majors," College and University XLVI (Fall, 1970), p. 56.

Table 4
 Cumulative Percentages of Items Selected by All
 Senior Students Presented in Descending Order

Item	Description*	Cumulative Percent
j.	Change of interest	36.75%
e.	Success in another field	25.99
b.	Unrealistic goals	20.54
i.	Inadequate counseling	20.23
k.	Other reason(s)	18.30
d.	Job demands have changed	17.63
f.	Disliked the staff	15.93
a.	Earn money quicker	14.35
g.	Collegiate pressure	12.64
h.	Parental pressure	11.21
c.	Insufficient funds	10.02

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, pp. 86-87 for complete description of items.

chosen are discussed below. Table 5 illustrates the ranking of each item from first to eleventh inclusively. Of the eleven items female students could respond to, those most frequently selected under Rank 1 (first choice) were Items j) You had a change of interest (6%), k) Other reason(s) (5%), and b) You discovered that you had unrealistic goals in terms of your ability (3%). The items receiving the least choices were Items g) The college forced you to make a decision too soon (1%), c) You did not have the money to pursue your original major (1%), and h) You were pressured into taking a major by your parents (1%).

The two responses chosen most frequently under Rank 2 (second choice) were Items e) You have had greater success in another field (4%), and j) You had a change of interest (3%). The two items receiving the least choices were Items c) You did not have the money to pursue your original major (1%), and h) You were pressured into taking a major by your parents (2%).

The responses chosen most frequently under Rank 3 (third choice) were Items j) You had a change of interest (3%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (2%). The items receiving the least choices were Items c) You did not have the money to pursue your original major (1%), a) You were able to achieve your goal to work (earn money) in another field (1%), and h) You were pressured into taking a major by your parents (1%).

In order to see all eleven items ranked from most chosen to least chosen, it was decided to present these data in Table 6 showing the cumulative percentages of the items. These items are placed in descending order.

As can be seen, Items j) You had a change of interest (16%), and

Table 5

The Rankings and Percentages of the Female Students Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	18* 2.35%**	8 1.04%	2 .26%	4 .52%	4 .52%	1 .13%	3 .39%	1 .13%	2 .26%		
b.	23 3.01	12 1.57	6 .78	5 .65	1 .13	3 .39	2 .26	1 .13	3 .39		
c.	3 .39	2 .26	1 .13	2 .26	2 .26	3 .39		3 .39		2 .26%	1 .13%
d.	11 1.43	12 1.57	18 2.35	3 .39		4 .52	3 .39				2 .26
e.	16 2.09	28 3.66	14 1.83	7 .91	7 .91	1 .13	1 .13				
f.	9 1.17	15 1.96	7 .91	7 .91	4 .52	1 .13				2 .26	
g.	2 .26	5 .65	9 1.17	5 .65	2 .26	2 .26	1 .13	1 .13	4 .52	1 .13	1 .13
h.	3 .39	10 1.30	3 .39	2 .26	3 .39	1 .13		1 .13	1 .13	6 .78	
i.	11 1.43	13 1.70	13 1.70	11 1.43	6 .78	1 .13	2 .26	4 .52			
j.	48 6.28	22 2.87	25 3.27	12 1.57	5 .65	3 .39	2 .26	1 .13	2 .26		
k.	38 4.97	13 1.70	5 .65	4 .52		1 .13					

*Number of students selecting this item

**Percentage based on N = 764

Table 6
 Cumulative Percentages of Items Selected by Female
 Senior Students Presented in Descending Rank

Item	Description*	Cumulative Percent
j.	Change of interest	15.68%
e.	Success in another field	9.66
k.	Other reason(s)	7.97
i.	Inadequate counseling	7.95
b.	Unrealistic goals	7.31
d.	Job demands have changed	6.91
f.	Disliked the staff	5.86
a.	Earn money quicker	5.60
g.	Collegiate pressure	4.29
h.	Parental pressure	3.90
c.	Insufficient funds	2.47

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, pp. 86-87 for complete description of items.

e) You have had greater success in another field (10%), continued to rank as the top two reasons for making changes in majors. Whereas, Item h) You were pressured into taking a major by your parents (4%), and c) You did not have the money to pursue your original major (3%), continued to rank as the reasons least frequently given by students for changes in majors.

Subhypothesis B

To determine what selections the male students will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.

The male student responses to those items most frequently chosen are discussed below. Table 7 illustrates the ranking of each item from first to eleventh inclusively. The male senior students most frequently chosen selections corresponded to the choices made by the female senior students under Rank 1. The choices were Items j) You had a change of interest (8%), k) Other reason(s) (7%), and b) You discovered that you had unrealistic goals in terms of your ability (5%). The opinions and studies of Akenson and Beecher, Feldman and Newcomb, Davis, Astin and Panos, and Snelling and Boruch presented in Chapter II corroborate the choices of j and b.⁷ These authors reported that a student undergoes changes in attitudes and interests during his four years of attendance at college and that there is a movement by the students from the more difficult courses to the less difficult courses.

The items receiving the least choices under Rank 1 were Items c)

⁷Akenson and Beecher, loc. cit.; Feldman and Newcomb, loc. cit.; Davis, loc. cit.; Astin and Panos, loc. cit.; see also Snelling and Boruch, loc. cit.

Table 7

The Rankins and Percentages of the Male Students Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	13* 1.70%**	14 1.83%	5 .65%	12 1.57%	8 1.04%	5 .65%	2 .26%	4 .52%	3 .39%	1 .13%	
b.	38 4.97	16 2.09	10 1.30	12 1.57	8 1.04	5 .65	2 .26	4 .52		1 .13	
c.	6 .78	4 .52	9 1.17	5 .65	7 .91	11 1.43	7 .91	3 .39	3 .39		1 .13
d.	12 1.57	22 2.87	16 2.09	17 2.22	6 .78	1 .13	4 .52	1 .13	1 .13	1 .13	
e.	22 2.87	43 5.62	31 4.05	11 1.43	7 .91	3 .39	3 .39	1 .13	1 .13		
f.	13 1.70	7 .91	17 2.22	10 1.30	10 1.30	10 1.30	2 .26	2 .26	1 .13	4 .52	
g.	7 .91	10 1.30	8 1.04	5 .65	4 .52	6 .78	4 .52	5 .65	11 1.43	4 .52	
h.	7 .91	5 .65	5 .65	4 .52	2 .26	1 .13	1 .13	5 .65	8 1.04	12 1.57	2 .26
i.	13 1.70	18 2.35	19 2.48	9 1.17	8 1.04	9 1.17	3 .39	7 .91	4 .52	2 .26	
j.	59 7.72	47 6.15	24 3.14	113 1.70	7 .91	1 .13	9 1.17	4 .52	2 .26	3 .39	
k.	52 6.80	8 1.04	7 .91	1 .13	4 .52		1 .13				

*Number of male students selecting this item

**Percentage based on N = 764

You did not have the money to pursue your original goal (1%), g) The college forced you to make a decision too soon (1%), and h) You were pressured into taking a major by your parents (1%).

The responses chosen most frequently under Rank 2 (second choice) were Items j) You had a change of interest (6%), e) You have had greater success in another field (6%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (3%). The items receiving the least choices were Items c) You did not have the money to pursue your original major (1%), and h) You were pressured into taking a major by your parents (1%).

The responses chosen most frequently under Rank 3 (third choice) were Items e) You have had greater success in another field (4%), j) You had a change of interest (3%), and i) You feel that you have had inadequate counseling (2%). The items receiving the least choices were Items a) You were able to achieve your goal to work (earn money) quicker in another field (1%), and h) You were pressured into taking a major by your parents (1%).

In order to see all eleven items ranked from most chosen to least chosen, it was decided to present these data in Table 8 showing the cumulative percentages of the items. These items are placed in descending order.

As can be seen, Items j) You had a change of interest (22%), and e) You have had greater success in another field (16%), continued to rank as the top two reasons for making changes in majors. Items j) and e) suggest that male students go through a period of exploration and adjustment whereby they attempt different classes searching for the major that appeals to them and is appropriate for them.

Table 8
 Cumulative Percentages of Items Selected by Male
 Senior Students Presented in Descending Rank

Item	Description*	Cumulative Percent
j.	Change of interest	22.09%
e.	Success in another field	15.92
b.	Unrealistic goals	12.53
i.	Inadequate counseling	11.99
d.	Job demands have changed	10.57
f.	Dislike the staff	9.90
k.	Other reason(s)	9.53
a.	Earn money quicker	8.74
g.	Collegiate pressure	8.32
c.	Insufficient funds	7.28
h.	Parental pressure	6.77

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, pp. 86-87 for complete description of items.

Items c) You did not have the money to pursue your original major (7%), and h) You were pressured into taking a major by your parents (7%), continued to rank as the reasons least frequently given by students for changes in majors.

Table 9 illustrates a comparison of the most frequently chosen items of the male students and the female students. As can be noted, Items j) You had a change of interest, k) Other reason(s), and b) You discovered that you had unrealistic goals in terms of your ability, were selected in the same order under Rank 1 by both the male and the female students. Under Rank 2 the male students selected Items j) You had a change of interest, and e) You have had greater success in another field, respectively. The female students reversed the above order under Rank 2.

Under Rank 3 the male students chose Items e) You have had greater success in another field, j) You had a change of interest, and i) You feel that you have received inadequate counseling, respectively. The female students' selections under Rank 3 differed from the male students. The female students chose j) You have had a change of interest, d) You realized that job demands have changed; you have a better chance of getting a job in another field, e) You have had greater success in another field, and i) You feel that you have received inadequate counseling. The major difference between male and female selections occurred in the addition of Item d) You realized job demands have changed; you have a better success in another field, by the female students among the items most frequently selected. The other items differed primarily in order of sequence.

Table 9 demonstrates that no great disparity in the selections of the male students and the female students exists. Their reasons for

Table 9

Ranks and Selections of Most Frequent Responses Made by the
Male and Female Students to the Items on the Question,
"Why do Students Change Their Majors?"

Rank	Selections of Male Students	Items	Selections of Female Students
1	1	j. Change of interest	1
	2	k. Other reason(s)	2
	3	b. Unrealistic goals	3
2	1	j. Change of interest	2
	2	e. Success in another field	1
3	1	e. Success in another field	3
	2	j. Change of interest	1
	3	i. Inadequate counseling	4
		d. Job demands have changed	2

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, pp. 86-87 for complete description of items.

changing majors are quite similar.

Subhypothesis C

To determine what selections the students at the different age levels will make on the question, "Why do college students change their majors?" as reported in Part III on the students' questionnaire.

The students were placed in two groups. Group one consisted of those students who entered college upon graduation from high school and achieved senior status at college in four years; the category included students age 18 to 22. The second group included all students 23 years and older. Tables 10 and 11 illustrate the selections of the two age groups.

Of the eleven items the 18 to 22 years old students could respond to, those most frequently chosen under Rank 1 (first choice) were Items j) You have had a change of interest (8%), k) Other reason(s) (7%), and b) You discovered that you had unrealistic goals in terms of your ability (4%). The three items receiving the least choices were c) You did not have the money to pursue your original goal (1%), h) You were pressured into taking a major by your parents (1%), and g) The college forced you to make a decision too soon (1%).

The items most frequently chosen under Rank 2 (second choice) by the 18 to 22 years old students were j) You have had a change of interest (5%), and e) You have had greater success in another field (5%). The items receiving the least choices were h) You were pressured into taking a major by your parents (1%), and c) You did not have the money to pursue your original goal (0%).

Of all the items most frequently chosen under Rank 3 (third choice) by the 18 to 22 years old students, there was less than one

Table 10

The Rankings and Percentages of 18 to 22 Years Old Students Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	15* 1.96%**	10 1.30%	4 .52%	12 1.57%	7 .91%	3 .39%	4 .52%	4 .52%	4 .52%	1 .13%	
b.	32 4.18	19 2.48	9 1.17	11 1.43	6 .78	3 .39	4 .52	2 .26	2 .26	1 .13	
c.	4 .52	3 .39	6 .78	1 .13	5 .65	8 1.04	2 .26	4 .52	3 .39	2 .26	2 .26%
d.	13 1.70	20 2.61	20 2.61	11 1.43	4 .52	3 .39	6 .78	1 .13	1 .13		2 .26
e.	24 3.14	40 5.23	22 2.87	11 1.43	9 1.17	4 .52	1 .13	1 .13	1 .13		
f.	13 1.70	18 2.35	13 1.70	13 1.70	7 .91	7 .91		1 .13		5 .65	
g.	7 .91	7 .91	9 1.17	5 .65	5 .65	5 .65	3 .39	2 .26	10 1.30	3 .39	
h.	7 .91	9 1.17	7 .91	4 .52	3 .39	2 .26	1 .13	6 .78	4 .52	10 1.30	1 .13
i.	13 1.70	19 2.48	23 3.01	11 1.43	9 1.17	4 .52	4 .52	6 .78	3 .39		
j.	64 8.37	41 5.36	26 3.40	18 2.35	4 .52	2 .26	7 .91	2 .26	1 .13	1 .13	
k.	52 6.80	14 1.83	7 .91	3 .39	1 .13	1 .13					

* Number of students selecting this item

**Percentage based on N = 764

percentage point difference among them. They are: j) You have had a change of interest (3%), i) You feel that you have received inadequate counseling (3%), e) You have had greater success in another field (3%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (3%). The items receiving the least choices were Items a) You were able to achieve your goal to work (earn money) quicker in another field (1%), and c) You did not have the money to pursue your original major (1%).

Of the eleven items the 23 years and older students could respond to, those most frequently chosen under Rank 1 (first choice) were Items j) You have had a change of interest (6%), k) Other reason(s) (6%), and b) You discovered that you had unrealistic goals in terms of your ability (3%). The two items receiving the least choices were Items g) The college forced you to make a decision too soon (0%), and h) You were pressured into taking a major by your parents (0%).

The items most frequently chosen under Rank 2 (second choice) by the 23 years and older students were Items e) You have had greater success in another field (4%), and j) You have had a change of interest (3%). The two items receiving the least choices were Items c) You did not have the money to pursue your original goal (0%), and f) You personally disliked the staff in a particular field (0%).

The items most frequently chosen under Rank 3 (third choice) by the 23 years and older students were Items j) You have had a change of interest (3%), e) You have had greater success in another field (3%), and d) You realized that job demands have changed; you have a better chance of getting a job in another field (2%). The two items receiving the least choices were Items c) You did not have the money to pursue your

Table 11

The Rankings and Percentages of 23 Years and Older Students Responding to the Items on the Question, "Why Do Students Change Their Majors."

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	18* 2.35%**	13 1.70%	3 .39%	4 .52%	2 .26%	2 .26%	1 .13%	1 .13%	1 .13%		
b.	23 3.01	15 1.96	6 .78	7 .91	4 .52	4 .52		3 .39	1 .13		
c.	5 .65	3 .39	4 .52	5 .65	4 .52	6 .78	5 .65	2 .26			
d.	10 1.30	14 1.83	14 1.83	10 1.30	2 .26	2 .26	1 .13			1 .13%	
e.	15 1.96	29 3.79	24 3.14	6 .78	6 .78	1 .13	3 .39				
f.	10 1.30	3 .39	11 1.43	5 .65	6 .78	5 .65	2 .26	2 .26			
g.	3 .39	7 .91	8 1.04	5 .65	1 .13	2 .26	2 .26	4 .52	6 .78	1 .13	1 .13%
h.	3 .39	6 .78	2 .26	3 .39	2 .26			1 .13	6 .78	8 1.04	
i.	12 1.57	12 1.57	9 1.17	8 1.04	6 .78	6 .78	2 .26	4 .52	1 .13	2 .26	
j.	44 5.75	26 3.40	24 3.14	7 .91	8 1.04	1 .13	5 .65	2 .26	3 .39		
k.	44 5.75	11 1.43	4 .52	2 .26	3 .39		1 .13				

*Number of students selecting this item

**Percentage based on N = 764

original goal (1%), and h) You were pressured into taking a major by your parents (0%).

Table 12 illustrates a comparison between the two groups. Under Rank 1 the two groups chose the same items. The major difference was that the first two items under Rank 1 tied as first choices for 23 years and older group. Whereas the 18 to 22 years old group's items were ranked 1, 2 and 3, respectively. The items were: j) You had a change of interest, k) Other reasons(s), and b) You discovered that you had unrealistic goals in terms of your ability.

Under Rank 2 the 18 to 22 years old group chose Items j) You had a change of interest, and e) You have had greater success in another field. The 23 years and older group reversed these two items under Rank 2.

Under Rank 3 the sequence of items is different for the two groups. Also the choices of the 18 to 22 years old student were very close together with less than one percentage point difference between the top choice and the fourth choice. Whereas with the 23 years and older group the first two items tied but then there was a large drop to the second and third choices. Item j) You had a change of interest, ranked first for both groups. Item e) You have had greater success in another field also ranked first with the older group while it ranked third with the younger group. Item d) You realized that job demands have changed; you have a better chance of getting a job in another field, ranked second with the older group and fourth for the younger group. Item i) You feel that you have received inadequate counseling, ranked third for the older group and second for the younger group.

Ranks 1 and 2 on Table 12 indicated that there is a similarity

Table 12

Ranks and Selections of Most Frequent Responses Made by Two Designated Age Groups to the Items on the Question, "Why do Students Change Their Major?"

Rank	Selections of 18 to 22 Years Old Age Group	Item*	Selections of 23 Years and Older Age Group
1	1	j. Change of interest	1
	2	k. Other reason(s)	1
	3	b. Unrealistic goals	2
2	1	j. Change of interest	2
	2	e. Success in another field	1
3	1	j. Change of interest	1
	2	i. Inadequate counseling	3
	3	e. Success in another field	1
	4	d. Job demands have changed	2

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, pp. 86-87 for complete description of items.

among the reasons given for changing majors by the two designated age groups. Age does not seem to be a major factor in determining the reason for changing a major.

Hypothesis Two

To determine the deans' perception on the question "Why do college students change their majors?" as reported in Part III on the deans' questionnaire.⁸

To solicit responses to Hypothesis Two, questionnaires were sent to thirty deans of students in colleges in California with a student population between 1000 and 5000. Twenty-three deans returned their questionnaire for a seventy-seven percent return.

Table 13 illustrates the selections made by the deans. The major choices are Items j) The student has had a change of interest, e) The student has had greater success in another field, b) The student discovers that he had unrealistic goals in terms of his ability, d) The student realizes that job demands have changed; he has a better chance of getting a job in another field, and a) The student is able to achieve his goal to work (earn money) quicker in another field.

Table 14 illustrates the cumulative numbers for the first four rankings made by the twenty-three deans. Interpretation of the table should be made in this way: for example, Item j with a cumulative ranking number of 21 represents the number of times the twenty-three deans chose that item in the first four rankings.

Comparing the cumulative ranking numbers of the deans (Table 14, p. 56) to the cumulative percentage rankings of the students (Table 4,

⁸A sample of the deans' questionnaire is in Appendix A, p. 89-90.

Table 13

The Rankings and Percentages of the Deans of Students Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	3* 13.04%**	1 4.34%	2 8.69%	2 8.69%	2 8.69%		4 17.39%	3 13.04%	4 17.39%	2 8.69%	
b.		4 17.39	4 17.39	7 30.43	6 26.08		1 4.34	1 4.34			
c.				1 4.34	1 4.34			5 21.73	3 13.04	9 39.13	3 13.04%
d.	1 4.34	4 17.39	2 8.69	3 13.04	5 21.73	5 21.73%	2 8.69	1 4.34			
e.	2 8.69	6 26.08	5 21.73	4 17.39	3 13.04	1 4.34	1 4.34				
f.			1 4.34	3 13.04	2 8.69	5 21.73	4 17.39	1 4.34	4 17.39	2 8.69	
g.		2 8.69		1 4.34		1 4.34	2 8.69	5 21.73	6 26.08	5 21.73	
h.	1 4.34	1 4.34	3 13.04	1 4.34	2 8.69	4 17.39	3 13.04	2 8.69	4 17.39		1 4.34
i.		1 4.34	1 4.34	1 4.34	1 4.34	6 26.08	5 21.73	3 13.04		4 17.39	
j.	14 60.86	3 13.04	4 17.39					2 8.69			
k.	2 8.69	1 4.34	1 4.34								

*Number of deans selecting this item

**Percentage based on N = 23

Table 14

Cumulative Numbers for First Four Rankings Made
by the Deans on the Items on the Question,
"Why Do Students Change Their Majors?"

Item	Description*	Cumulative Numbers**
j.	Change of interest	21
e.	Success in another field	17
b.	Unrealistic goals	15
d.	Job demands have changed	10
a.	Earn money quicker	8
h.	Parental pressure	6
f.	Disliked the staff	4
k.	Other reason(s)	4
g.	Collegiate pressure	3
i.	Inadequate counseling	3
c.	Insufficient funds	1

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix , pp. 89-90 for complete description of items.

**These numbers represent the number of times the 23 deans chose "Change of interest" among the first four choices.

p. 38), one finds that the three highest choices are identical. They are Items j) You had a change of interest, e) You have had greater success in another field, and b) You discovered that you had unrealistic goals in terms of your ability. On the three highest choices, the deans' perception on the question, "Why do students change their majors?" is congruent with the actual choices of the students.

The items receiving the least choices by the students were Items g) The college forced you to make a decision too soon, h) You were pressured into taking a major by your parents, and c) You did not have the money to pursue your original major. The items receiving the least choices by the deans were Items g) The college forced you to make a decision too soon, i) You feel that you have received inadequate counseling, and c) You did not have the money to pursue your original major.

Items g (Collegiate pressure) and c (Insufficient funds) were ranked in the same position by the students and by the deans. Item i (Inadequate counseling) was ranked ninth by the deans and ranked fourth by the students. The students apparently felt that inadequate counseling was a problem, whereas the deans see it as having little bearing on the subject, "Why do students change their majors?" There seems to be a large disparity between the rankings of Item i by the students and by the deans.

Hypothesis Three

To determine the advisers' perception on the question, "Why do college students change their majors?" as reported in Part III on the advisers' questionnaire.⁹

⁹A sample of the advisers' questionnaire is in Appendix A, p.92.

To solicit responses to Hypothesis Three, questionnaires were sent to ninety advisers in colleges in California with a student population between 1000 and 5000. Eighty advisers returned their questionnaires for an eighty-nine percent return.

Table 15 illustrates the selections made by the advisers. The major choices are Items j) The student had a change of interest, e) The student has had greater success in another field, b) The student discovers that he had unrealistic goals in terms of his ability, and d) The student realizes that job demands have changed; he has a better chance of getting a job in another field.

Table 16 illustrates the cumulative numbers for the first four rankings made by the eighty advisers. Interpretation of the table should be made in this way: for example, Item j with a cumulative number ranking of 62 represents the number of times the eighty advisers chose that item in the first four rankings.

Comparing the cumulative numbers of the first four rankings of the advisers (Table 16, p. 60) to the cumulative percentage rankings of the students (Table 4, p. 38) one finds that the three highest choices are identical. They are Items j) You had a change of interest, e) You have had greater success in another field, and b) You discovered that you had unrealistic goals in terms of your ability. These choices were also selected by the deans as the three highest choices.

The items receiving the least choices by the students were Items g) The college forced you to make a decision too soon, h) You were pressured into taking a major by your parents, and c) You did not have the money to pursue your original major. The items receiving the least choices by the advisers were Items i) You feel that you have received

Table 15

The Rankings and Percentages of the Advisers Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	2* 2.50%**	6 7.50%	8 10.00%	9 11.25%	11 13.75%	7 8.75%	9 11.25%	4 5.00%	7 8.75%	4 3.75%	1 1.25%
b.	21 26.25	13 16.25	9 11.25	10 12.50	6 7.50	1 1.25	1 1.25				
c.		1 1.25		5 6.25	4 5.00	5 6.25	7 8.75	13 16.25	12 15.00	16 20.00	3 3.75
d.	5 6.25	5 6.25	12 15.00	12 15.00	8 10.00	10 12.50	10 12.50	4 5.00	4 5.00		
e.	10 12.50	19 23.75	15 18.75	10 12.50	8 10.00	5 6.25	1 1.25	2 2.50	3 6.25		
f.		1 1.25	5 6.25	5 6.25	5 6.25	10 12.50	6 7.50	13 16.25	8 10.00	10 12.50	2 2.50
g.	1 1.25	4 5.00	4 5.00	4 5.00	2 2.50	5 6.25	6 7.50	13 16.25	11 13.75	13 16.25	2 2.50
h.	3 3.75	5 6.25	7 8.75	9 11.75	7 8.75	7 8.75	10 12.50	4 5.00	5 6.25	8 10.00	
i.		4 5.00	1 1.25	4 5.00	11 13.75	9 11.25	11 13.75	6 7.50	11 13.75	5 6.25	
j.	35 45.00	14 17.50	8 10.00	5 6.25	3 3.75	5 6.25	3 3.75	1 1.25		1 1.25	
k.	2 2.50	2 2.50	2 2.50	1 1.25	4 5.00		1 1.25	1 1.25			1 1.25

*Number of advisers selecting this item

**Percentage based on N = 80

Table 16

Cumulative Numbers for First Four Rankings Made
by the Advisers on the Items on the Question,
"Why Do Students Change Their Majors?"

Item	Description*	Cumulative Numbers**
j.	Change of interest	62
e.	Success in another field	54
b.	Unrealistic goals	53
d.	Job demands have changed	34
a.	Earn money quicker	25
h.	Parental pressure	24
g.	Collegiate pressure	13
f.	Disliked the staff	11
i.	Inadequate counseling	9
k.	Other reason(s)	7
c.	Insufficient funds	6

*Longer stated items have been paraphrased for efficiency of presentation. See Appendix A, p.92 for complete description of items.

**This number represents the number of times the eighty advisers chose "Change of interest" among the first four choices.

inadequate counseling, k) Other reason(s), and c) You did not have the money to pursue your original major.

Item c (Insufficient funds) was ranked last by the students and the advisers. Item k (Inadequate counseling) was ranked ninth by the advisers and ranked fourth by the students. The advisers appear to have the same perception as the students on the three most frequently chosen items as to "Why do students change their majors?" But they appear to underestimate the importance of counseling.

Hypothesis Four

To determine what procedures students must follow in order to change their major.

To determine what procedures students had to follow, interviews were conducted with the person who is responsible for the changing of majors at the three institutions that the student population was drawn from.

The procedure at Pacific Union College for changing a major was the least complex one studied. A student obtains a new adviser in the field he wants to go into and has this person sign his registration materials. No further steps are necessary to change a major. A student is free to choose a new major and adviser each time he registers for classes. No steps are taken to minimize changes in majors.¹⁰

At the University of the Pacific changes in major are administered by the Dean of Students. A student wanting to change his major obtains a change of major petition from the dean's office. The student first has the petition signed by his former adviser then has it signed by

¹⁰Statement by Howard Hardcastle, personal interview, December 6, 1971.

the chairman of the new department he is seeking admittance to. The Chairman will assign him an adviser. The dean's office will then request the student's folder from the former adviser and send it to the new adviser. No steps are taken to minimize changes in majors.¹¹

The procedures to change majors at Stanislaus State college are similar to those at the University of the Pacific with one exception; the Academic Advising Office (AAO) administers the procedure. A student requests a petition from the AAO. He has it signed by his former adviser after which he takes the petition to the chairman of the new department. The chairman will sign the petition and assign an adviser to the student. Then the petition is returned to the Admissions and Records Office (ARO). The ARO places a copy of the petition in the student's folder and sends a copy to the AAO. Here information is coded and sent to the computer. No fee is charged. The students may change majors as often as they like.¹²

In this section the four descriptive hypotheses have been discussed. Deans, advisers and students perceive the same items ranking highest with "Change of interest" remaining as most important reason for changing a major.

NULL HYPOTHESES

Hypothesis One

There will be no difference in the number of students changing their majors and the number of students not changing their

¹¹Statement by Miss Deanna Filippone, secretary to the Dean of Students, personal interview, January 11, 1972.

¹²Statement by Mrs. Wilma Rolison, secretary to Academic Advising Dean, personal interview, January 26, 1972.

major as reported in Part II of the students' questionnaire.

To test Hypothesis One, a binomial test of significance was used. As with the following null hypotheses, the chosen level of significance was .01. The analysis of the data shown in Table 17 illustrates that a highly significant number of students changed their majors. Therefore, the null hypothesis was rejected.

Fifty-five percent of the students returning questionnaires changed their majors one or more times. The number of changes reported by the students approximates the number of changes found among college students reviewed in the literature in Chapter II. Sparlings reports sixty-five percent of the students changed their majors, Rosenberg and Iffert report fifty percent, Anderson reports sixty percent, Davis reports fifty percent, and Akenson and Beecher report sixty-one percent.¹⁴

Table 17
Percentages of the Students Changing and
Not Changing Their Majors

	Number of Students	Percentage
Changed majors	419	55%
Did not change majors	345	45
Total	764	100%

$z = 2.67$, binomial test

¹⁴Edward J. Sparling, Do College Students Choose Vocations Wisely? (New York: Bureau of Publications, 1933, p. 39; Morris Rosenberg, Occupations and Values (Glencoe, Illinois: The Free Press, 1957), pp. 72-92; Bert D. Anderson, Introduction to College (New York: Holt, Rinehart and Winston, Inc., 1969), pp. 35-36; Davis, op. cit., p. 14; see also Akenson and Beecher, op. cit., p. 178.

A breakdown in the number of changes is given in Table 18.

Table 18
Number of Times Students Made Changes
in Their Majors With Percentages

Number of times changed major	Number of Students	Percentages based on N=764
1	276	36%*
2	84	11
3	37	5
4	17	2
5	4	1
6	1	0
Total	419	55%

*Numbers were rounded to nearest percent.

Subhypothesis A

There is no difference in the number of males and females who change their majors.

To test Subhypothesis A, a chi square test of significance was used. An analysis of the data shown in Table 19 illustrates that there was no significant difference between the number of males who changed majors and the number of females who changed majors. Subhypothesis A was accepted.

Subhypothesis B

There is no difference in the number of 18 to 22 years old students and 23 years and older students who change their majors.

A breakdown in the number of changes is given in Table 18.

Subhypothesis A

There is no difference in the number of males and females who change their majors.

Table 18
Number of Times Students Made Changes
in Their Majors With Percentages

Number of times changed major	Number of Students	Percentages based on N=764
1	276	36%*
2	84	11
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4	17	2
5	4	1
6	1	0
Total	419	55%

*Numbers were rounded to nearest percent.

To test Subhypothesis A, a chi square test of significance was used. An analysis of the data shown in Table 19 illustrates that there was no significant difference between the number of males who changed majors and the number of females who changed majors. Subhypothesis A was accepted.

Subhypothesis B

There is no difference in the number of 18 to 22 years old students and 23 years and older students who change their majors.

To test Subhypothesis B, a chi square test of significance was used. The analysis of the data presented in Table 20 shows that a significantly higher number of 23 years and older students changed their major. Therefore, Subhypothesis B was rejected.

One could conclude that the older the student the more likely that he has changed majors.

Hypothesis Two

A change in major will be perceived by the students as having no positive effect on their future plans.

To test Hypothesis Two, a binomial test of significance was used with the $P = .9$ and $Q = .1$ based on the findings of the Rochester and McBride study.¹⁵ This test was used to determine whether this group of students differs from the population sample of Rochester and McBride study in satisfaction and non-satisfaction with change in major. It is highly unlikely that a majority of the students would be dissatisfied. Using the binomial test, a z score was computed as shown in Table 21.

A z score of 1.88 was derived. This demonstrates that similar number of students in this study was satisfied with their change in major as in the Rochester and McBride study. Rochester and McBride report that ninety-one percent of the students surveyed were satisfied with their change in major; whereas this study reports eighty-seven percent of the students surveyed were satisfied with their change in major.

Subhypothesis C

There will be no difference between the number of males and the number of females who report that a change in major will have a positive effect on their future plans.

¹⁵Rochester and McBride., loc. cit.

Table 19

The Number and the Sex of the Students
Making and Not Making Changes
in Their Majors

Sex	Number of students changing majors	Number of students not changing majors
Females	184	153
Males	234	193

$\chi^2 = .003$, N.S.

Table 20

Number of 18 to 22 Years Old and 23 Years
and Older Students Who Made Changes
in Their Majors and Did Not Make
Changes in Their Majors

Age	Number of students changing majors	Number of students not changing majors
18 to 22 years old	236	258
23 years and older	182	88

$\chi^2 = 21.97$, H.S.

Table 21

Students Who Report Change in Major
as Satisfactory or Unsatisfac-
tory on Future Plans

Number of students who report change satisfactory	Number of students who report change unsatisfactory
358	53

$z = 1.88$, binomial test, N.S.

To test Subhypothesis C, a chi square test of significance was used. Table 22 illustrates that the obtained chi square of 1.71 was non-significant.

Table 22

Male and Female Students' Responses to the
Question That the Change in Major
Has Been Satisfactory or
Not Satisfactory

	Change satisfactory	Change not satisfactory
Males	206	25
Females	156	28

$\chi^2 = 1.71, N.S.$

Subhypothesis C was accepted. It appears that both male students and female students perceive a change in majors as having a positive effect on their future plans.

Subhypothesis D

There will be no difference between the 18 to 22 years old students and the 23 years and older students in that a change in major will be perceived as having a positive effect on their future plans.

Table 23 illustrates that the obtained chi square of 3.02 was non-significant.

Subhypothesis D was accepted. It appears that both 18 to 22 years old students and 23 years and older students perceive a change in majors as having a positive effect on their future plans.

Table 23

Designated Age Groups Responses to the
Question That the Change in Major
Has Been Satisfactory or Not
Satisfactory

	Change satisfactory	Change not satisfactory
18 to 22 years old students	200	36
23 years and older students	162	17
$\chi^2 = 3.02, N.S.$		

This concludes the findings of the null hypotheses. Next are presented the remaining parts of the questionnaires that were not suitable for inclusion as either a descriptive or null hypothesis.

PART I OF THE STUDENTS' QUESTIONNAIRE

Part I of the students' questionnaire asked the students if they had been continuously enrolled in college. Five hundred fifty-six students out of seven hundred sixty-four students indicated that they had been continuously enrolled in college.

Of the seven hundred sixty-four students, four hundred twenty-five indicated they had transferred to their present college. Of the four hundred twenty-five transfer students, three hundred eighteen had attended a junior college.

Students attending four year institutions and who had transferred to another college were asked if their current college offered a better

opportunity to pursue their major. Forty-five replied yes and sixty-two replied no. Approximately fifty-eight percent of the students of four-year institutions who transfer, have reasons other than a better opportunity to pursue their major for changing colleges.

PART V OF THE STUDENTS' QUESTIONNAIRE

Part V of the students' questionnaire asked the students, "How does your institution handle changes in majors?" Generally the students showed such a lack of knowledge on this subject that the data were unuseable. Many students indicated that they did not know the procedure. Several students checked erroneous information, such as, the college charged a fee when students changed their majors. Therefore, Part V of the students' questionnaire had to be discarded.

PART IV OF THE DEANS' QUESTIONNAIRE

Part IV of the deans' questionnaire asked the deans if any one office at their college kept a tally of the number of changes a student makes in his major. Four deans replied yes, sixteen deans replied no, and three deans omitted the question.

Of the four deans that replied yes, three indicated that the Registrar kept the records and the other dean indicated that the Office of Admissions and Records kept a record of the number of changes in majors made by the students.

It appears that it is not a wide spread practice for colleges to keep a running tally of the number of changes a student makes in his major.

PART V OF THE DEANS' QUESTIONNAIRE

Part V of the deans' questionnaire asked the question, "What steps is your institution taking to minimize or eliminate changes in majors?" The results of the questionnaire will be found in Table 24.

Table 24

Steps Taken by Colleges to Minimize Changes in Majors as Reported by the Deans

Number of responses	Items
2	a. Students are charged a fee for changing their majors.
7	b. Students are counseled before being allowed to change majors.
2	c. Students must go through a committee to initiate changes in majors.
6	d. Students must go through a petition process to change majors.
12	e. None of the above.
2	f. Other. Please specify:

The responses under "Other" are as follows: 1) "We permit lower division students to be undeclared as to a major" and 2) "We do not allow freshmen to declare a major until the end of his first year and we make it perfectly clear that he or she should feel free to remain open on this matter until the end of his sophomore year."

In addition the following postscripts were added to the bottom of the questionnaires:

1. We attempt to work with students to help them realize

satisfaction and success. Students are sometimes encouraged to change majors and to grow in the direction of new interests and emerging potential.

2. Students must petition to change their majors but the requirement is for record keeping purposes and not to minimize or eliminate changes in majors.
3. We are not concerned about it but encourage entering freshmen not to rush into declaring a major.
4. We feel that mobility may be a good thing for students and take no active role in minimizing changes in majors.
5. Why should an institution minimize or attempt to eliminate changes?
6. I'm not sure that I agree with the implication that major changes should be eliminated.
7. What is wrong with changing a major? College years are often a time of personal exploration. You shouldn't penalize a person for changing!
8. What is wrong with a student changing his major?

It would appear from the questionnaires that changes in majors are not being minimized or eliminated in the colleges surveyed. These institutions have an orderly way of changing a major and this procedure is mainly for the purpose of keeping a record of the change. Some counseling is involved in these colleges when a change in major takes place but it does not appear that it is for the purpose of eliminating changes in majors.

SUMMARY

Chapter IV presented the findings of the study. Both descriptive hypotheses and null hypotheses were presented with their related information.

It was shown that students most often changed their majors because of "Change of interest." This choice was selected by both sexes

and by each age group. This viewpoint was also held by the deans of students and advisers.

Other major reasons given for change of majors were: "Had unrealistic goals in terms of your ability," and "Greater success in another field."

The least frequently chosen items were: "College forced you to make a decision too soon," "Pressured into taking a major by your parents," and "Did not have the money to pursue original major."

Procedures to follow in order to change majors were also studied. One institution permitted students to change majors at registration time and the other two institutions used a petition process. The procedures used were for the purpose of keeping track of students' majors. No limitations or charges were levied against the students for changing majors.

An hypothesis which proposed that there would not be any difference in the number of students changing majors and not changing majors was rejected when tested by the binomial test of significance. A significantly higher number of students changed their majors.

Using the chi square test of significance, it was determined that sex was not a factor in determining number of changes in majors but that age was an influencing factor. The older the student the more likelihood that he has changed his major.

An hypothesis was proposed that a change in major would be perceived by the students of this study as having a positive effect on their future plans as compared to the results of the Rochester and McBride study. The binomial test of significance indicated there was no significant difference between the two groups.

Using the chi square test of significance, it was determined that neither age or sex were factors that determine whether a change in major had a positive effect on one's future plans.

Next are presented the remaining parts of the study that were not suitable for inclusion as either a descriptive or null hypothesis.

Five hundred fifty-six students out of seven hundred sixty-four students indicated that they had been continuously enrolled in college. Three hundred eighteen students had attended a junior college. Forty-two percent of the students from four year institutions indicated they transferred to present college because it offered a better opportunity to pursue their majors.

Students were queried on how changes of majors were made at their institution. Generally the students showed such a lack of knowledge on this subject that the data were unusable.

The deans were asked if any one office kept track of changes in majors. Out of twenty-three deans, four replied "yes."

The deans were also asked what steps their institution was taking to minimize changes in majors. Of the deans replying to the question, it appeared that their institutions were not taking any steps to minimize changes in majors. Most of the institutions had an orderly procedure to follow for record keeping purposes.

Chapter IV has presented the findings of the descriptive hypotheses and the null hypotheses. Parts of the questionnaire not related to the hypotheses were discussed also.

Chapter V will be organized into two sections, as follows:

1) Summary, and 2) Recommendations and Conclusions.

CHAPTER V

SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

SUMMARY

The general purpose of this study was to determine why students change their majors in colleges and universities having an enrollment between one thousand and five thousand students.

The specific purposes were: 1) to determine if the deans' and advisers' perceptions of why students change their majors at the college level are congruent with the students' perceptions, 2) to determine what colleges are doing to minimize changes in majors, 3) to determine if students were satisfied with their changes in majors, and 4) to determine how many students made changes in their majors.

The need for the study was an outgrowth of these factors: 1) the universality of students changing their majors in colleges and universities, 2) the absence of systematic studies on the reasons why students change their majors, 3) current discussions on the increasing cost of education and the possibility of accelerating students through college, and 4) the conservation of time, energy, and money.

A review of the literature pertaining to reasons why students change their majors showed that information on the topic was limited. The articles and books relating to the subject usually dealt with vocations and professions, setting forth statistics on the number of students entering a vocation or profession and the number finally completing the requirements for the vocation or profession. Some sources dealt with one

field only, such as science. Articles pertaining specifically to college majors were found in College and University, the quarterly publication of the American Association of Collegiate Registrars and Admissions Officers. No single source set forth the reasons for changing a major as seen from the students' point-of-view. A lack of empirical data on the subject of changing majors was found to exist.

Using the 1970 Yearbook of Higher Education a population of thirty institutions in California meeting the enrollment criteria was selected for the study. A questionnaire was constructed and mailed to the deans of students (or to their functional equivalent) at thirty selected institutions.

The student sample was selected from one public institution, one private nondenominational institution, and one religiously affiliated institution. A questionnaire was constructed and mailed to the seniors attending these three institutions.

The adviser sample was taken from the same institutions that the student population was drawn. A questionnaire was constructed and mailed to thirty advisers at each institution.

After the questionnaires were returned, the results were tabulated and analyzed either descriptively or statistically, whichever was appropriate.

It was found that fifty-five percent of the student population changed their majors. (Thirty-six percent changed once, eleven percent changed twice, and eight percent changed more than twice.)

Listed below are the major reasons given by the seniors for changing their majors. The reasons have been placed in descending order.

1. You had a change of interest.

2. You have had greater success in another field.
3. You discovered that you had unrealistic goals in terms of your ability.
4. You feel that you have received inadequate counseling.

Reasons one, two, and three appear to be interrelated. While most students had selected a major before entering college, over half of them changed majors. The early years of college seem to be a period of exploration and growth for most students generally followed by a more realistic appraisal of themselves and their interests. Earlier decisions are re-evaluated and re-examined in light of new data that have been accumulated about themselves, their interests, and their friends.

The responses of the male and female students to the question, "Why do students change their majors?" were similar. The male students changed majors more often because of unrealistic goals in terms of their ability. The male students also appeared to be more aware of current job trends. The female students gave more often than the male students individualized reasons for changing majors.

The difference between the responses of 18 to 22 years old age group, and the responses of 23 years and older age group were minor. But it was noted that the older students were more likely to have changed majors than the younger students. The older students appeared to be more aware of current job demands and to be influenced more by success in particular fields.

The students reporting a change in their majors overwhelmingly perceived this as having a positive effect on their future plans. Apparently more mature now and having better defined interests they were able to be more decisive about a major and to be satisfied with their

decision.

The deans of students and the advisers appeared to be quite perceptive in regard to the reasons why students change their majors. The chief difference between them and the students was over Item i, "You feel that you have received inadequate counseling." The students ranked Item i as more important than the deans or advisers did.

How colleges minimize changes in majors was also studied. The results indicated that most colleges have an orderly procedure to follow to change majors. The procedure is mainly for record keeping purposes. Out of twenty-three colleges, two charged a fee to change a major. Most colleges let students change majors at their discretion.

RECOMMENDATIONS AND CONCLUSIONS

More than half of all students changed their majors one or more times before graduating from college. Students should be encouraged to delay declaring a major until they have had adequate time to explore and to learn more about themselves. Possibly a more realistic time schedule would have the students declare a major upon achieving junior status. This would give them the opportunity to adjust to the institution, to select their own major, to receive academic counseling, to develop a social conscience, and to develop adequate peer relationships.

In addition, as an outgrowth of the study the investigator recommends the following areas for greater study:

1. Accelerated programs are being advocated and adopted by some colleges and universities. The literature showed that a student undergoes considerable change in his four years at college. One must weigh the possibility that the shorter period might not give some students

adequate time to develop and mature to their fullest potential--academically, socially, politically, and religiously. A study to analyze the effects of accelerated programs on students should be undertaken.

2. The study showed that some students felt they were not receiving adequate academic counseling and that this was one of the major reasons given for changing majors. Therefore, colleges should develop a program for the training of college advisers in the task of advising students.

3. This study could be repeated but should include larger institutions to see if the reasons for changing majors tend to be universal.

4. The literature demonstrated that a young adult upon graduating from high school is still developing in many areas, two of which are the developing of a social conscience and the developing of adequate peer relationships. A study to analyze the effects of a program that would encourage students to work or travel a year before entering college should be undertaken. One could construct a comparative study to measure the two areas above between two groups--one directly entering college and one postponing college for a year.

5. A study could be developed to analyze the causes of program changes--the changing of classes.

6. Possibly a relationship exists between program changes and changes in majors. A study should be developed to determine if this is so.

It was thus seen that college students have a right to mature before making determinative decisions about their future careers or about life in general. Perhaps we have been too anxious to speed the education process as this study demonstrated that more than fifty percent of the

students changed their future plans during their four years of attendance at college. The literature illustrated even further that change in social and political views occur too.

Every college student deserves the best possible counseling services. Although this might mean the changing of priorities at some colleges, the students have the right to expect it. The years immediately following high school appear to be crucial in one's life and their importance should not be minimized.

It is hoped that the findings of this study might illuminate perceptions of those persons advising students. Perhaps a greater understanding of students and why they change their majors will emerge. Hopefully, this will create a greater empathy between students and advisers, thus leading to more realistic and helpful advising.

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APPENDICES

APPENDIX A

October 5, 1971

Dear Student:

The Laboratory of Educational Research at the University of the Pacific is conducting a study on "Why Do Students Change Their Majors." An important segment of the study will be the opinions of college students.

Won't you please indicate your honest reaction to the questions on the enclosed questionnaire? It shouldn't take very much of your time, but what you tell us might be tremendously beneficial to the University. Please return the questionnaire in the enclosed stamped envelope.

Many thanks for your time and cooperation.

Sincerely yours,

Marvin E. Locke, Ed.D.
Assistant Director

Encl.: 2

MEL/toh

Questionnaire

Name of institution: _____

Part IA. Sex: Male _____ Female _____ (check appropriate blank)

Part IB. Age: 18-22 _____ 23-29 _____ 30-35 _____ Older _____
 years _____ years _____ years _____

Part IC. Have you continuously gone to college without a break in your studies? _____

Part ID. ✓ Did you transfer to present college you are now attending? _____

If your answer is yes, is it because your current college offers a better opportunity to pursue your major? _____

Did you attend a junior college? _____

Part IE. ✓ What is your current college major? _____

Part II. Have you ever made a change in your major since your initial enrollment in college. For this questionnaire, change in major will be interpreted as meaning a change in formal course of study.

_____ Yes. If yes, how many times? _____ What have been your previous college majors? (List in chronological order. _____)

(If your answer is yes, go to Part III and complete the questionnaire.)

_____ No. (If your answer is no, go directly to Part V, omitting Parts III and IV.)

Part III. Please rank the following reasons that applied to you in making a change in your major. Place a 1 before the reason influencing you most, then a 2, etc. Use only those items applying to you. Please feel free to add any reasons omitted by the researcher.

- _____ a. You were able to achieve your goal to work (earn money) quicker in another field.
- ✓ _____ b. You discovered that you had unrealistic goals in terms of your ability.
- ✓ _____ c. You did not have the money to pursue your original major.
- ✓ _____ d. You realized that job demands have changed; you have a

- _____ better chance of getting a job in another field.
- _____ e. You have had greater success in another field.
- _____ f. You personally disliked the staff in a particular field.
- _____ g. The college forced you to make a decision too soon.
- _____ h. You were pressured into taking a major by your parents.
- _____ i. You feel that you have received inadequate counseling.
- _____ j. You had a change of interest.
- _____ k. Other reason(s); please state. _____
- _____
- _____

Part IV. Now that you have had an opportunity to think about your change in your major, how do you feel about the change? Check the appropriate blank.

- _____ a. The change in your major has been highly satisfactory with regard to your future plans.
- _____ b. The change in your major has not been satisfactory with regard to your future plans.

Part V. How does your institution handle changes in majors? Please check appropriate blanks.

- _____ a. Students are charged a fee for changing their major.
- _____ b. Students are counseled before being allowed to change a major.
- _____ c. Students must go through a committee to initiate change in major.
- _____ d. Students must go through a petition process to change a major.
- _____ e. None of the above.
- _____ f. Other (please state). _____
- _____

October 11, 1971

Dear

The Laboratory of Educational Research at the University of the Pacific is conducting a study on "Why Do Students Change Their Majors." An important segment of the study will be the Dean of Students' (or functional equivalent's) perception of this topic.

Though this is a busy time for you, it would be appreciated if you would take a few minutes from your schedule to complete the enclosed questionnaire and return it in the enclosed stamped envelope.

The questionnaire is being sent to all California colleges and universities having an enrollment of between 1000 and 5000. It is designed to give an insight into the question, "Why do students change their major?"

Many thanks for your time and cooperation.

Sincerely yours,

Marvin E. Locke, Ed.D
Assistant Director

Encl: 2

MEL/toh

Questionnaire

Name of cooperating Institution:

Part I. Name of individual completing questionnaire:

Part II. Title:

Part III. Please rank the following reasons that students have for making changes in their majors as you perceive them. Place a 1 before the reason you perceive as most often used; then continue ranking every item a through k. Please feel free to add any reasons omitted by the researcher.

- a. The student is able to achieve his goal to work (earn money) quicker in another field.
- b. The student discovers that he had unrealistic goals in terms of his ability.
- c. The student does not have the money to pursue his original major.
- d. The student realizes that job demands have changed; he has a better chance of getting a job in another field.
- e. The student has had greater success in another field.
- f. The student personally dislikes the staff in a particular field.
- g. The college forced the student to make a decision too soon.
- h. The student had been pressured into taking a major by his parents.
- i. The student felt that he had received inadequate counseling.
- j. The student has had a change of interest.
- k. Other reason(s); please state _____

Part IV. Does any one office at your college keep a tally of the number of changes a student makes in his major?
 Yes No If your answer is yes, please state the office.

Part V. What steps is your institution taking to minimize or eliminate changes in majors. Please check appropriate blanks.

- a. Students are charged a fee for changing their major.
- b. Students are counseled before being allowed to change a major.
- c. Students must go through a committee to initiate a change in a major.
- d. Students must go through a petition process to change a major.
- e. None of the above.

* ____ f. Other (Please state). _____

*The questionnaire mailed to the deans covered one page only. Because of the need for wider margins in the dissertation, the questionnaire was expanded to two pages.

February 12, 1972

Dear Faculty Member:

The Laboratory of Educational Research at the University of the Pacific is conducting a study on "Why Do Students Change Their Majors." An important segment of the study will be the faculties' perception of this topic.

We should greatly appreciate your completing this questionnaire and returning it to us in the enclosed envelope. All of the information is to be coded and used in group comparisons for research purposes only, so your responses will be kept entirely confidential.

Since we are only using a limited sample of faculty members, it is important to secure as complete a response as possible. We hope you will be able to participate.

Thank you for your consideration.

Sincerely yours,

Marvin E. Locke, Ed.D.
Assistant Director

Encl.: 2

Questionnaire

Part I. Name of Institution: _____

Part II. Academic Area of faculty member: _____

Part III. Please rank the following reasons that students have for making changes in their majors as you perceive them. Place a 1 before the reason you perceive as most often used; then continue ranking every item a through k. Please feel free to add any reasons omitted by the researcher.

- _____ a. The student is able to achieve his goal to work (earn money) quicker in another field.
- _____ b. The student discovers that he had unrealistic goals in terms of his ability.
- _____ c. The student does not have the money to pursue his original major.
- _____ d. The student realizes that job demands have changed; he has a better chance of getting a job in another field.
- _____ e. The student has had greater success in another field.
- _____ f. The student personally dislikes the staff in a particular field.
- _____ g. The college forced the student to make a decision too soon.
- _____ h. The student had been pressured into taking a major by his parents.
- _____ i. The student felt that he had received inadequate counseling.
- _____ j. The student has had a change of interest.
- _____ k. Other reason(s); please state. _____

APPENDIX B

Table 25

The Rankings and Percentages of Senior Students at Pacific Union College Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	11* 4.82%**	6 2.63%	3 1.31%	7 3.07%	4 1.75%	5 2.19%	1 .43%	3 1.31%			
b.	20 8.77	15 6.57	7 3.07	4 1.75	5 2.19	1 .43	2 .87	2 .87	2 .87%	1 .43%	
c.	3 1.31	4 1.75	5 2.19	4 1.75	2 .87	4 1.75	3 1.31	2 .87	3 1.31	1 .43	
d.	10 4.38	11 4.82	8 3.50	7 3.07	5 2.19	1 .43	3 1.31			1 .43	
e.	16 7.01	19 8.33	12 5.26	9 3.94	6 2.63	2 .87	2 .87				
f.	7 3.07	9 3.94	11 4.82	5 2.19	3 1.31	5 2.19	1 .43	2 .87		2 .87	
g.	3 1.31	1 .43	1 .43	2 .87	2 .87	4 1.75	2 .87	3 1.31	8 3.50	2 .87	
h.	5 2.19	5 2.19	4 1.75	3 1.31	3 1.31	1 .43	1 .43	3 1.31	4 1.75	8 3.50	1 .43%
i.	5 2.19	9 3.94	12 5.26	7 3.07	5 2.19	3 1.31	3 1.31	4 1.75	2 .87	1 .43	
j.	31 13.59	30 13.15	16 7.01	9 3.94	4 1.75	2 .87	4 1.75	1 .43		1 .43	
k.	31 13.59	2 .87	3 1.31	1 .43		1 .43	1 .43				

* Number of students selecting this item

**Percentage based on N = 228

Table 26

The Rankings and Percentages of Senior Students at Stanislaus State College Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	10* 5.46%**	5 2.73%	1 .54%	4 2.18%	4		2 1.09%	2 1.09%	3 1.63%	1 .54%	
b.	13 7.10	9 4.91	5 2.73	7 3.82		3 1.63		2 1.09			
c.	4 2.18	1 .54	4 2.18	1 .54	5 2.73	6 3.27	1 .54	2 1.09			1 .54%
d.	5 2.73	13 7.10	9 4.91	7 3.82	1 .54	2 1.09	4 2.18				1 .54
e.	12 6.55	20 10.92	16 8.74	2 1.09	1 .54	2 1.09	1 .54	1 .54			
f.	7 3.82	4 2.18	5 2.73	5 2.73	4 2.18	3 1.63				3 1.63	
g.	4 2.18	8 4.37	5 2.73	2 1.09	4 2.18		3 1.63	1 .54	6 3.27		
h.	3 1.63	3 1.63	1 .54	1 .54		1 .54		1 .54	3 1.63	8 4.37	
i.	8 4.37	6 3.27	11 6.01	3 1.63	1 .54	4 2.18	2 1.09	5 2.73	1 .54	1 .54	
j.	28 15.30	17 9.28	13 7.10	7 3.82	4 2.18		3 1.63	2 1.09	3 1.63	1 .54	
k.	27 14.75	8 4.37	3 1.63	1 .54	2 1.09						

*Number of students selecting this item

**Percentage based on N = 183

Table 27

The Rankings and Percentages of Senior Students at the University of the Pacific Responding to the Items on the Question, "Why Do Students Change Their Majors?"

Item	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6	Rank 7	Rank 8	Rank 9	Rank 10	Rank 11
a.	11* 3.11%**	12 3.39%	3 .84%	4 1.13%	3 .84%	2 .56%	2 .56%		2 .56%		
b.	20 5.66	13 3.68	5 1.41	7 1.98	5 1.41	4 1.13	2 .56		2 .56		
c.	3 .84		1 .28	2 .56	4 1.13	4 1.13	3 .84	2 .56%		1 .28%	1 .28%
d.	7 1.98	12 3.39	17 4.81	6 1.69		2 .56		1 .28	1 .28		1 .28
e.	9 2.54	32 9.06	20 5.66	8 2.26	8 2.26			1 .28			
f.	10 2.83	9 2.54	7 1.98	8 2.26	7 1.98	2 .56	1 .28		1 .28	1 .28	
g.	4 1.13	6 1.69	9 2.54	6 1.69		4 1.13		2 .56	1 .28	3 .84	1 .28
h.	5 1.41	6 1.69	3 .84	1 .28	2 .56			3 .84	2 .56	3 .84	1 .28
i.	14 3.96	15 4.24	10 2.83	9 2.54	7 1.98	3 .84		2 .56	2 .56		
j.	46 13.03	22 6.23	19 5.38	10 2.83	4 1.13	1 .28	5 1.41	2 .56		1 .28	
k.	34 9.63	12 3.39	7 1.98	5 1.41	2 .56						

*Number of students selecting this item

**Percentage based on N = 353