

THE EFFECTS OF PREREGISTRATION ADVISEMENT OF STUDENTS
BY A COUNSELOR ON THE CHOICE OF COLLEGE
MAJORS AND OTHER SELECTED
CRITERION MEASURES

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DISSERTATION

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CHAPTER I

INTRODUCTION

Through the years colleges have acquired a responsibility to assist inexperienced youth in adjusting to demands of the institution. This task probably has been complicated by students' concern for the relevancy of every experience at college and an acute anxiety state stimulated by the unfamiliar environment. With regard to discharging the colleges' responsibility, there are benefits for the student expected to accrue from a preregistration advisement service. Counseling, orientation and advisement may assist the student in perceiving the institution as meeting his needs. These services may assist the student in modifying his behavior whereby he will better adjust to college life. If counseling, orientation and advisement are effective, a student should make educational plans which are consistent with his own academic potential.

Computer technology has been a major concern of many involved in student personnel work. There now exists the potential of mechanically performing many of the services which in the past have been provided through faculty and staff interaction with students. Champion and Erickson (2, pp. 357-364) have reviewed the practical and philosophical considerations of such a potential. These writers have

taken a broad view of the situation, from admissions to registration, have concurrently applied critical thought and technical knowledge, and made the point that all practical mechanical improvements must necessarily be supplemented with understanding and competent human assistance.

As the preregistration advisement function typically exists, it involves advising, counseling, and to some varying degree, orientation. The term orientation has been applied, in some schools, to the same procedures that are identified as preregistration advisement at other schools (5, p. 1025; 6, pp. 1-26). Preregistration in some cases has been used by writers (1, p. 302) on the subject to mean merely "early registration." These semantic problems may hinder clear communication of the concepts and terminology relative to preregistration.

The advent of sophisticated electronic computers has made the furnishing of preregistration advisement, in terms of recommended courses, possible as a mechanical process (2, p. 357; 4, p. 68). Adequate information relative to the student's educational objective, supplied in addition to the admission records, would be a prerequisite to computerized preregistration. However, the possibility of satisfying the individual student's needs encourages the continuance of a more personalized preregistration advisement.

The social status of technical and occupational majors, as seen by prospective students, has been widely recognized

as a major problem faced by junior college educators who seek to accomplish the goals of student advisement (7, p. 20; 3, p. 32). There are at least two forces converging to create a state of tension relative to technical and occupational education. Students approach college with the social pressures and historical prestige of the baccalaureate degree strongly influencing their choice of an educational objective. Frequently at cross purposes to these strong directing forces are the practical considerations of the student's exhibited achievements and the anticipated requirements of potential employers.

An attitude expressed by many college age youth is that one cannot be successful in life without a college education, and that this must consist of four years of study and receipt of a baccalaureate degree (3, p. 32). This attitude creates some unusual and paradoxical situations for students.

This paradox is frequently observed among students who are generally classified as "college material." These students, who are capable of functioning in an environment demanding highly specialized academic skills, will sacrifice opportunities in programs best suited to their own interests and aptitudes because they do not lead to a baccalaureate degree. The fact that successful accomplishment of a technical or occupational program may offer the graduate greater earning potential and more personal satisfaction than a

baccalaureate degree program is either of little consequence or extremely difficult to communicate to students.

Among the reasons for such a paradox may be the fact that this society has had a very long and revered history of higher education almost exclusively related to the baccalaureate degree. In many areas of the nation it has been but a very few decades since higher education was directed almost exclusively toward the professions of teaching, law, and the ministry. In these, the liberal arts curriculum was sufficient for undergraduate preparation. When young people were encouraged to go to college, they usually sought a liberal arts education. The fact that the liberal arts are only a fractional part of the offerings at the college level today has probably not affected the thinking of many who influence the college student. That the educational system which produced the high school graduate provides only models which are baccalaureate degree holders is probably also significant. Another influence contributing to the situation is that exerted by managers in businesses and industries who restrict the progress of an employee holding an associate degree, as opposed to a baccalaureate degree. Managers who place a premium on academic degrees in preference to technical competence are still existent, but their attitudes are rapidly changing (7, p. 20). However, business in recent years have tended to reward computer programmers, chemical technicians, and electronics technicians on the basis of the

quality of their work performance and not on the basis of the type of degree received (7, p. 20).

Counselors have long been aware of the multitude of majors open to college students. Assisting students to find a major field of study which will afford a comfortable adjustment to college is important. This is a task complicated by the range of college majors available through community junior colleges. This is a broader range than that at senior colleges and universities. Another factor affecting their choice of majors is that students in community junior colleges come from a wider range of socioeconomic backgrounds than do senior college students. Types of majors selected by students are subject to similar parental influences in junior and senior colleges. With these considerations bearing on counselors, can preregistration advisement facilitate students' adjustment to the college environment?

There are at least two alternatives for the student personnel worker in regard to preregistration advisement of entering freshman students. A highly personalized advisement may include an individual interview with a professional counselor or faculty advisor. An impersonal preregistration advisement would possibly permit the utilization of mechanical methods with some advantages in cost and accuracy. Benefits accruing to students derived from the psychological effects of various methods of advisement should be the primary concern of those in positions of authority in student personnel work.

Statement of the Problem

The problem for consideration in this study was an investigation of the effects of two methods of preregistration advisement of junior college freshmen. Specifically, the following questions were posed. What would be the effects on college students of an individual preregistration advisement interview with a member of the professional counseling staff as compared to a group advisement session? Would the advisement interview for students produce differences in (1) the types of majors selected, (2) probabilities of success in declared educational objectives, (3) perceptions of the environment, (4) changes of major, (5) course changes, (6) failures to complete registration, (7) withdrawals during the first eight weeks of classes, and (8) number of course deficiencies reported at mid-semester? An auxiliary consideration was the following. What would be the effects of providing information about technical-occupational programs in the form of brochures?

Applicants were assigned to two groups: those to receive brochures and those who did not receive them. Members of these two groups were subsequently assigned to groups to be invited in for individual advisement interviews and those to be advised in groups. The assignments to these four groups permitted the designation of two individually advised experimental groups of subjects and two control groups.

Hypotheses

The following hypotheses were formulated:

I. There would be a significant difference among the four groups of applicants in the distribution for types of majors chosen.

A. Individuals in the experimental group receiving information on technical-occupational majors would make significantly more choices of technical-occupational majors than individuals in the experimental group who did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information with regard to types of majors chosen.

C. The experimental groups would make significantly more choices of technical-occupational majors than the control groups.

II. There would be a significant difference in the proportion in each of the four groups of applicants with regard to their probability of success in educational objectives based on their A.C.T. scores.

A. There would be no significant difference between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-

occupational majors and the control group which did not receive the information.

C. The experimental groups would achieve higher ratings on probability of success in educational objectives than the control groups.

III. There would be a significant difference among the means of the four groups on scores achieved on the Junior College Environment Scale.

A. There would be no significant difference between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would achieve significantly higher mean scores on the Junior College Environment Scale than would the control groups.

IV. There would be a significant difference among the four groups of applicants in the proportion of students changing majors between the receipt of the reply to the questionnaire and completion of registration.

A. There would be no significant differences between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would make significantly more changes of major than would the control groups.

V. There would be a significant difference among the four groups in the proportion of applicants failing to complete registration.

A. There would be no significant difference between the experimental groups receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving the information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would have significantly fewer applicants failing to complete registration than would the control groups.

VI. There would be a significant difference among the four groups of applicants in the proportion of students changing courses during the schedule change period.

A. There would be no significant difference between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would make significantly fewer course changes during the schedule change period than the control groups.

VII. There would be a significant difference among the four groups of students in the proportion who withdrew during the first eight weeks of the semester.

A. There would be no significant difference between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would have significantly fewer students who withdrew during the first eight weeks than would the control groups.

VIII. There would be a significant difference among the four groups of students in the proportion being reported for course grade deficiencies at mid-semester.

A. There would be no significant difference between the experimental group receiving information on technical-occupational majors and the experimental group which did not receive the information.

B. There would be no significant difference between the control group receiving information on technical-occupational majors and the control group which did not receive the information.

C. The experimental groups would have significantly fewer credit hours of course deficiencies reported at mid-semester than the control groups.

Definition of Terms

1. Accepted for admission--Any student who is a high school graduate or equivalent and who makes application to the college and furnishes A.C.T. scores, high school transcript, and a medical report will be accepted for admission. Acceptance for admission is official when the admission office furnishes the applicant with notice in writing of his acceptance.

2. Applicant--an individual who has submitted a completed application form to the college.

3. Brochures--information brochures on technical-occupational majors at the college.

4. College, the--a large urban community junior college which is the locus for the study.

5. Course--a regularly scheduled class at the college, consisting of content and instruction by which college credit may be earned.

6. Majors--an academic or technical-occupational field for which a person may become educationally qualified by completing a prescribed program of study. Majors were divided into four types: (1) certificate programs, (2) Associate in Applied Arts degrees, (3) Associated in Applied Science degrees, (4) transfer programs.

7. Probability of success--Students achieving at or above the ACT composite scores as indicated below for specific types of majors will be considered to have a high probability of success. These cut-off (minimum) scores are based on the median scores of samples of students from the fall 1967 class who achieved 2.0 or higher GPA in particular types of majors (see Appendix A). A GPA of 2.0 represented a "C" average on a four-point scale.

Certificate programs	13 ACT composite score
Associate in Applied Arts degrees	17 ACT composite score
Associate in Applied Science degrees	16 ACT composite score
Transfer programs	21 ACT composite score

8. Program--a series of courses which lead to graduation in some specified major.

9. Schedule change period--the first week of regularly scheduled classes during which class schedules and courses may be changed.

10. Technical-occupational field--majors offered at the college which prepare a student for a specific job opportunity regardless of the transferability of the courses.

11. Transfer courses--courses closely paralleling those offered at senior colleges and universities which may be accepted for credit toward a baccalaureate degree.

12. Types of majors--All technical-occupational majors were classified by graduation award into three types. These were certificate majors, Associate in Applied Arts majors, and Associate in Applied Science majors. A fourth type consisted of all transfer majors.

Basic Assumptions

The following basic assumptions are those under which this study was designed:

1. Each of the students invited on campus for pre-registration advisement conferences received the same extra-experimental treatment after he arrived for spring semester registration.

2. The students entering the college during the semester of the study were typical of entering full-time freshman students.

Limitations of the Study

The degree to which the results may be generalized to other situations is limited by the following factors:

1. The study was limited to 114 applicants for the spring semester at a junior college. These applicants had not previously attended college, except for students who had completed six semester hours or fewer of college credits. One cannot generalize the results of this study to other college students who have had more extensive college experiences.

2. The results obtained from the study are limited to the extent that randomization effectively controlled the occurrence of confounding variables.

3. The study investigated only the effects of the variable treatment during the first eight weeks of the spring semester.

4. Students who were mailed technical-occupational brochures but who indicated that they had not received the brochures were included in the experimental and control groups. It is not possible to generalize about the extent to which the receipt of the brochures by these subjects would have altered the obtained results of the study.

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CHAPTER II

RELATED LITERATURE

The statements by writers in regard to the impact of technology on student personnel services has given rise to some paradoxical claims. Some junior colleges have reported that they spent up to a million dollars and a year of hard work to achieve automated registration, while others have published claims that this has been accomplished by a few bright students in their spare time (45, pp. 68, 70). "The IBM card is rapidly becoming the key to higher education in the United States," said Champion and Ericksen (14, p. 357). They also commented: "The computer can liberate as well as tyrannize." Avera (5) has highlighted the tremendous increase in the use of computers to mechanize the functions of registration. Not only has consideration been given to computerizing clerical tasks, but also to entire guidance programs. Smith (73) has enumerated the problems which the development of computer potential presented for consideration in a public school guidance program.

The use of any type of preregistration had been criticized by some registrars. The criticisms may have partially evolved from a semantic problem arising from the question, "What does preregistration entail?" In a study by Anderson (3) there was an appraisal of the wide variety of opinion

regarding "pre-registration" for a small college. He outlined these opinions from the students' point of view, the instructors' point of view, and the administrators' point of view. His conclusion was that no greater degree of "pre-registration" was feasible in that situation. A point which Anderson did not seem to fully understand was that preregistration did not necessarily have to include all of the functions from admission to the completion of the registration process. In effect, he was discussing early registration and its concomitant conflicts. In contrast to Anderson's conclusion, Shaw (71) advocated a nonstop registration. He quoted registrars as criticizing nonstop registration as being "preadvisement under another name." It was not clear from the use of the terms by writers what was meant by pre-registration, advisement, orientation or counseling. In the confusion of opinions, criticisms, and problems, Johnson (42) has stated that counseling, placement, testing, admissions, research, and orientation programs were the areas most in need of improvement by the personnel services in the junior colleges of Illinois. Such statements have given an added impetus to the search for ways to improve these programs.

The choice of college majors may be a critical incident in achieving adjustment to the college environment by students. In an early study by Darley and Hagenah (18), support was given to the hypothesis that feelings of alienation, dissatisfaction, and changes of plans resulted from

incongruences between a student and his major field. Abe and Holland (1, p. 1) reported that "Most people have assumed that satisfying choices require some matching of student characteristics and competencies with the demands of the prospective fields of study."

Family influences, socioeconomic factors, and academic preparation have been found to affect student choices of college majors. Higher college entrance test scores, high school background, upward mobility, emphasis on a prestige career, and coming from a generally higher socioeconomic level seemed to characterize transfer students. The influence of parents on occupational choice and rank in graduating classes were similar for the terminal and transfer students in the junior college. Werts (81) studied the parental influence on career choice, while Hakanson (27) compared selected characteristics, socioeconomic status and levels of attainment in junior college occupational courses. Information on college majors and other factors for 6,860 entering freshmen at accredited two-year colleges was collected by Panos (64). The data were useful in establishing general characteristics of entering junior college freshmen. Anthony (4) observed that a great deal of similarity existed between transfer and terminal students' characteristics.

The effects of the various factors contributing to the process of selecting majors were evidenced in a typical class profile. In The 1968 ACT Class Profile Report (2) of enrolled

students, 59.5 per cent of the applicants to the college intended to pursue a university transfer major, 22.5 per cent of the applicants intended to enter a technical-occupational field, and 18 per cent of the applicants chose either some other field not listed in the student profile or were undecided.

When a student knows the limitations to his academic potential, the student's choice of major may be influenced by the availability of specialized services in college. Information to students about some of the pitfalls in certain types of majors and the availability of remedial courses can be determining factors. That a student in a transfer major faces a potential difficulty has been shown by Hills (33). He indicated that transfer students experienced an appreciable drop in grades in their first semester after transfer. Transfer students experience their greatest difficulties in mathematically oriented programs and at major state universities. One of Hills' conclusions was that institutions accepting transfer students should require a higher pre-transfer grade point average than that set for probation of native students. McKinney (50) found that remedial programs were generally included in the sample of junior college curricula which he investigated.

Some of the financial burdens of college may be diminished by cooperative programs for technical majors. Information about such opportunities could be of value to students who

are deciding on a major. Opportunities for cooperative education are quite generally available. The fact that work study programs, or more properly, cooperative education, were available in some eighty colleges and universities has been pointed out by the National Commission for Cooperative Education (55, p. 174).

Many students appear to select transfer majors because of the traditional prestige of baccalaureate degree programs (74, pp. 11-12). There is some reason to believe that choices of majors based on traditional prestige are subject to modification. The improved status of vocational education could prove to be a contributing factor in reducing the occurrences of unwise student choices of transfer majors. Blocker and Anthony (9) found that prestige was a very significant factor among students selecting transfer programs. They concluded that "many such students could succeed in appropriate terminal programs in the junior college when led to see the opportunities that lie in them." They also found considerable evidence which indicated student attitudes toward occupations were changeable through information and counseling. Tolonen (78, p. 30) presented an optimistic view of the status of vocational education: "That vocational education is used as a rubbish heap for the scholarly world is gradually becoming obsolete."

As an informational tool for counselors to use with students who may have avoided technical-occupational education

due to supposed lower status of those types of majors, some of the more recent findings may be useful. The American Institute for Research (23, pp. 6-7) has produced some interesting information. From a sample of 13,000 students from 100 high schools in 38 states over 11 years, researchers found that vocational students got first full-time jobs much quicker, that vocational students had greater accumulated earnings over the 11-year period than did academic graduates. Eleven years after graduation, 87 per cent of the vocational students still resided and worked in cities where they went to school. Between vocational and academic graduates, "the study found no difference in conversational interests, leisure time activities, and affiliation with community organizations." The report concluded "the findings . . . contradict the contention that vocational graduates are more poorly educated than are academic graduates from the standpoint of education of the whole person."

There are numerous theories about people who are benefited by receiving various forms of occupational information. The importance of occupational information in the counseling interview was emphasized by Hoyt (39, p. 74). "In any counseling interview, the essential kind of student decision making process taking place is one intended to help the student decide: How does this information affect me?" The value of occupational information appears to be a product of the skills and techniques of the counselor. In discussing

the competencies of counselors it is important to mention the relationship of learning theory to vocational decisions. Miller (52) compared and applied a learning theory of vocational counseling to developmental, psychoanalytic and trade approach theories of vocational decision. The possibility that the counselor may be or should be working to change beliefs rather than values is a conclusion easily drawn from Biddle's article on role theory (7). The counselor's work must contribute to changing attitudes from one of fixed vocational choice to one which is more attentive to other occupations. Borrow (11) in his systematic examination pointed out that occupational information is filtered by the counselee through psychological sets, attitudes, preconceptions, and defenses. Improved occupational information, he inferred, may include elementary counseling, orientation to work in elementary schools, and experimental work on the effects of attitudes and emotional states on perception. The value of practical experience on one's occupational effectiveness was pointed out by Kelly (44, p. 20) in his study of contributing factors to counselor effectiveness.

The types of occupational information appear to be endless in variety. Student preferences for specific approaches and availability of materials stimulated many writers. Wease, Eberly, and Iaconetti (80) found that high school students seemed to prefer a closed circuit television program on vocational guidance rather than the traditional homeroom type

program. Forster (25) and LeVake (48) have suggested the utilization of programmed booklets for the purpose of disseminating vocational information. Boocock (10) and Varenhorst (79) have suggested that a life career game may be effective in teaching effective decision making behavior. Crawford (17) has suggested that simulation and games may influence decision making. Sheppard (72) has applied experimental procedures to the study of the effects of problem solving procedures for stimulating vocational exploration. The development of game theory and simulation is an innovative departure from the traditional work-study, on-the-job training, and the field trip approach to providing perceptual experiences to facilitate the acquisition of occupational information. Nevertheless, Norris, Zeran, and Hatch (55, pp. 46, 2, 465) stated that there has been an increase in the number of educational field trips and visits by students and their teachers or counselors to nearby schools, as part of orientation programs. Some advantages of field trips, for occupational orientation, were also pointed out. Inconveniences and infringements on other class activities were pointed out as the primary limitations of field trips.

Some attempt has been made to obtain objective evidence of the effects of occupational information on students. Hopfengardner (34) reported on a study which utilized a sound filmstrip "Your Future Through Technical Education." The findings were most favorable to vocational education, whereas

in a twelve year study in Ohio's secondary schools, only eight-tenths of 1 per cent high school students had indicated an interest in vocational education at the high school level. Hopfengardner found that 53.1 per cent of the students viewing the film were interested in pursuing vocational education at the post-secondary level. The most frequently selected first choice programs were computer programming, accounting, child care, nursing, and mechanics. Those students in Hopfengardner's sample attending vocational high schools expressed a very high interest in pursuing the same fields in which they had majored in high school. In subsequent questions only 6.3 per cent of the students involved in the study indicated a definite plan to enroll in technical programs. This gave rise to questions concerning the reliability of the previous responses received by Hopfengardner.

The responsibilities for implementing the occupational information program as well as the types of materials and methods to be employed have evoked many comments. Raines (66) claimed that the primary responsibility for the preparation, analysis and distribution of career information lies with the federal and state government. Blocker (9, p. 72) felt that the best use of occupational information can be made in conjunction with "seminars, career nights and other devices designed to increase student awareness of the importance of occupational choice as well as the breadth of career opportunities." Harris (28), in speaking of occupational

information said, "News releases, brochures, slide film tape programs, speakers, open houses, television programs, realistic pronouncements from business and industrial leaders, all these and more must be used and they must be used continuously." Blocker (9, p. 74) in commenting on Harris' statement said, "It is only fair to point out, however, that the kind of effort Harris calls for cannot be left as the sole responsibility of the guidance staff. It must be an institution wide effort." Hoyt (39) said that currently a large percentage of high school students who desired information about post graduate training of a vocational nature never discussed this with their high school counselor. He also commented on the forced "marriage" of educational and occupational information. Such a combination usually did not meet the needs of students. Educational information, he felt, took "a more career emphasis." Vocational or occupational information was of a more temporary nature. He said that increased feeling of responsibility for information on vocational education was caused by the fact that "certain basic decisions in this area cannot be postponed as long as they can for the student entering the liberal arts college." While most studies have emphasized various types of learning and decision making situations, Hakanson (27) has advocated a need for outright recruitment of more high school graduates into occupational programs.

Tests are considered, by some writers, to occupy a primary place in vocational guidance. As a guidance and placement tool, Crawford (17) has revealed that one institution had developed and validated test batteries for some fifty-five trade and technical curricula. The value of such tests was attested to by Dugan (21). He felt that knowledge of each youth's abilities, aptitudes, and interests, as well as attitudes and adjustments, were important tools for the counselors.

Admission to college is a vital link in the chain of student experiences which results in students enrolled and attending college. No study of student experiences from initial inquiry to class attendance would be complete without some consideration of this function. Admissions is the procedure by which an applicant becomes eligible to register as a student. There are several records which have to be furnished by the applicant. This step usually affords the applicant his first experience with the student personnel services of the college. It is difficult, if not impossible, to make any broad general statements about the admissions function nationally. Jefferson reported:

. . . a growing number of admissions officers is deeply concerned, or should be, with the fact that no major study of the total flow of students from school to college has ever been attempted. We have only the most meager of knowledge about our individual situations, their relationship to cooperative or competitive groups of colleges and almost no knowledge of how all this fits into a national scene

which may or may not have as many jumbled pieces as some of the jig saw puzzles we pondered over in past times (40).

He further asserted,

. . . a study which can be a model for constant research and comparison is long overdue. How else are we to plan to make maximum use of educational plants and of our young people's potential (40).

.
Why does education permit its most serious problems to go unstudied and unattended (40).

In deference to the two-year college, Jefferson said,

. . . the two-year college may be an answer for many, but it may postpone the question and complicate the situation for others. Who will counsel and guide this student on to his B.A.? Will he return to his already overworked high school counselor for advice? Can he be better served by clearing houses as he attempts this transition, or will he fall into a second order of academic lepers comparable to his transfer brother within the world of the four year college (40).

There appears to be abundant evidence of an increasing flow of information regarding admissions and placement in colleges; these data appear to conflict with Jefferson's position. Roueche (69) has studied the subject of entrance and placement testing and the utilization of such information in an institution. He said that utilization of available information is hindered by a lack of evaluative data. The Junior College Research Review (43) has devoted an issue to the subject of entrance and placement testing. Admissions in the sense that Jefferson discussed is not a significant problem in the community junior college. There is, however, a practical consideration regarding the necessity for

coordinating the student's efforts to accumulate the necessary records and materials in order to gain admission.

Upon admission of students there is the further question in the minds of educational administrators of what preregistration advisement and orientation process would contribute most to the satisfactory adjustment of students to college. Jesseph (41) in the study of pre-college orientation conferences made an observation of the divergent conclusions which seem to emanate from experimental studies of the subject. Jesseph warned of faulty experimental control procedures, which would temper the conclusion that the students who attended the pre-college orientation conference at the University of Wyoming were not aided in improving their academic performances. Sensor (70) found that the majority of the students indicated that they normally solved their problems without counseling assistance, and many of the more pertinent areas amenable to counseling treatment were not considered appropriate for the college counselor. The study suggested a need for clarification of the counselor role and function. Increased counselor availability and improved communication between students and counselors were also cited as recommended areas for improvement. Hill (32) in a study of motivation and academic counseling has suggested that voluntarily seeking counseling is an important variable in the achievement of counseling effectiveness. Marks, Ashby, and Noll (51, p. 976) concluded "that academic performance,

whether measured by short term grade point average or long term persistence is reliably related to student behavior in relation to counselor recommendation regarding curricular choice." Bowlin (12), in studying a summer orientation and counseling program for entering freshmen with predicted GPA's below 2.0, found that participants had significantly fewer members academically disqualified at the end of the term than did non-participants. He concluded from this that the summer program "had achieved some success in facilitating one area of student adjustment." Richter (67) found in evaluating the effects of the interview on clinical predictions of academic performance that generally the counselor's predictions were not usually more accurate than the student's self predictions. Hosford (35) has suggested that a process for decision making, including motivating students to seek and use information prior to making decisions, would greatly enhance counseling programs and the quality of the decisions resulting from these programs. Ellis (24) has given a rudimentary demonstration among other things of the information system for vocational decisions and orientation. In a statement by Blocker (8, p. 72) a significant thought about counselor orientation is expressed, ". . . counselors, by their very orientation tend to present information without making recommendations." This counselor orientation necessitates the utilization of other instructional personnel to augment counselors' efforts in such

guidance programs as those connected with recruitment of students.

Affective measures have yielded results which indicate that subjects are significantly influenced by preregistration advisement. The study which tries to isolate the initial counseling interview is extremely rare in the literature. One exception is the study by Pearce (65) at the College of San Mateo. Pearce studied the initial preregistration counseling interview from the standpoint of its affective results. The student's satisfaction and feelings about the preregistration counseling as to whether he thought the counseling met his needs was the question for consideration. Specifically, students' feelings in regard to rapport, counseling and advisement were investigated. Fifty-five per cent of the students rated the preregistration counseling as above average. Thirty-one per cent rated it as average and 13 per cent rated it as below average. One in five of the students saw the process as needing no improvement. According to counselors, the establishment of rapport between student and counselor was of primary importance. Students rated counselor performance in this regard as satisfactory. Students thought that counselors were doing a good job, going from the general (goals) to the specific (courses) during counseling, but counselors were doing an inadequate job of relating educational goals to the characteristics of the student. It should be pointed out that the students

were not satisfied with the help they received on how to get through the registration procedure. One of the conclusions made by Pearce, which merits a great deal of consideration, was that

The establishment of the personal relationship between student and counselor was not developed sufficiently following this pre-registration counseling session for most students to think in terms of a particular counselor to help them solve some academic problem (65, p. 22).

In exploring the possibility that length of time spent with the counselor would influence student satisfaction, Pearce found that the probability of an excellent or good rating increased as the time spent with the counselor increased. The most common suggestion for ways of improving the counseling program was the need for more discussion and time with their counselors. Hayes (29) found that a half hour counselor-student interview was highly valued by the students, but most students felt that more time was needed. Osipaw (57) questioned beginning college freshmen about their ideas on the preregistration program. The counseling interview was deemed the most useful part of the program by 438 respondents. The highest frequency of behavior change occurred among the group of students who "used the program as an aid in problem solving." A note of caution is sounded by Ofman (56) regarding short term evaluation of counseling effects. Even with a relatively intense counseling treatment of twelve group sessions, an eight-semester follow-up was necessary to determine the objective results of the counseling.

The question of improving the preregistration advisement service in many instances depends on employing group techniques. There have been studies which indicate that small groups of twelve or fewer students may be as effective as individual counseling interviews. The evidence appears conclusive. Small groups could permit the counselor to spend more time with students, thus resolving the time disadvantage of the interview observed by Pearce and Hayes. In a study, Spector and Garneski found that (75) students counseled in groups of twelve for approximately three two-hour periods achieved higher grade-point averages, and these students were significantly lower on drop-out rates than a control group, but no difference occurred in the semester hours earned. Students counseled in groups by Dessent (19), Larsen (47), and Ofman (56) were observed to earn higher GPA's. Duncan (22) found no such improvement. Driver's (20) conclusion was that small groups could be an excellent learning medium for personality growth. Studies conducted independently by Froehlich (26) and Bailey (6) indicated no significant difference between individual and multiple counseling. These findings imposed important considerations in planning a preregistration advisement program. In a study of early orientation, advising and counseling for selected freshmen entering the University of Oregon, Christensen (15) found the program to be effective in six major areas. He also concluded "The small group approach to orientation seems to

be justified by the positive value placed upon this program by the students."

The question of faculty advisors versus professional counselors was one of constant concern to those involved in student advising. Rossman (68) studied the impact upon freshmen who received faculty advising. He also used a control group which received no advisement. There were no significant differences in measures of general satisfaction with the college and level of aspiration between the two groups. Shaw (71, p. 45) mentioned the physical limitations to providing an adequate counseling staff and, as a result, made the conclusion that "Many of us believe that the best counselor is a teacher who knows what he is doing." An instructor has knowledge and orientation which may be useful in recruiting students (9, p. 72). This could be used as one important phase of a comprehensive guidance program. Lantz (46) studied the school advisor in social work education. Her conclusion was that

The study indicates that the school advisor can be highly effective if the educational purpose of this role is clear and consistently related to all parts of his student's program. The student needs someone who represents the school as a whole, its class work and its field practice. The advisor can serve as that person (46).

There is mounting evidence that programmed materials, games and simulation techniques are becoming more common, as general tools in the counseling and advisement of students. Thoresen and Mehrens (77, p. 168) have included programmed

materials in their counseling examples in regard to "decision theory and vocational counseling." They advanced the idea that "hypothetical students could be portrayed in story form, in which objective and subjective probability data is presented about them and discussed." Moreover, "Evidence suggests that students actually making several sequential career decisions for hypothetical students in a 'life career game' setting may facilitate the learning of effective decision-making behaviors by the players." In effect, Thoresen and Mehrens have grouped program materials with game theory and simulation techniques.

Counseling and advisement may be hindered by students' informational deficiencies about the college. Carrigan and Clancy (13, 16) have compiled and published two planning guides. These guides are programmed devices designed to aid in the acquisition of necessary information, and the guides encourage certain decision making processes. One planning guide is for the purpose of preregistration of new applicants who are prospective students for Golden West College. The second is for the educational planning of currently enrolled students at Golden West College. Those documents appear to provide a practical approach to the needs of both groups of students. In the preregistration planning guide are described procedures for students who desire to: take a limited number of classes for personal enrichment, enroll in specific courses in preparation for employment, complete

requirements for a high school diploma, earn a degree in an organized occupational program, or prepare for a transfer to a senior institution. The educational planning guide was reported to aid students at Golden West in (1) making career decisions, (2) obtaining information about education requirements for a chosen career, (3) formulating over-all educational plans, (4) planning detailed programs for all semesters of attendance at the college, and (5) reviewing plans with their advisors.

Counseling, advisement and the informational devices which are used to achieve behavioral modification may have their results altered by environmental press. Important contributions to behavioral change can result from initial positive impressions. The junior college environment is considered to have a significant effect on the persistence and achievement of students. Murray (54) was the first to describe the need-press dimensions of personality. The needs were the internal motivational factors of behavior and press was the external or environmental stimulus for behavior. Press presents to the individual the "threat of harm" or "promise of benefit." Press encompasses the actual effects of an environment on behavior. The need-press concept was of primary concern to Murray because of its effect on the individual.

With the advent of works by Pace (62) and Stern (76), the application of these concepts to groups was seen. The

development of the Activities Index by Stern established the possibility of measuring needs in groups. Stern and Pace developed the College Classification Index (CCI) to measure the press (environmental) counterparts to the needs identified in the Activities Index. Hendrix (31, p. 5) said:

Because Stern's interests are in the area of personality assessment he used the CCI for individual response analysis. Pace, reflecting his interest in evaluation and measurement in higher education, used CCI data as the basis for further research in derivation of institutional norms (31, p. 5).

Since the CCI was developed by Pace and Stern because of their common interest in the environmental factors that effectively distinguish between colleges. The CCI was "adapted" by Pace (58, 59) to meet the needs of his further investigations. The College and University Environment Scale (CUES) was the result of his adaptation. The CUES has norms established at a selected group of 50 4-year colleges and contains 150 items drawn from the CCI.

Subsequent research by Pace (63) has gone far to establish considerable validity and reliability for the instrument. Pace (60) has found high school seniors and college freshmen to be highly unrealistic in their perceptions of the college environment.

In 1967, a study by Pace (61) was published which reported on the use of CUES in junior colleges. Pace found "many of the items which discriminated very well between the environments of four-year colleges and universities did not

discriminate at all well between the environments of the 32 junior colleges."

Assuming that environment can influence behavioral modification, one sees the need to establish a reliable instrument for use in junior colleges. This need was in concert with research objectives of Hendrix. Hendrix (31), with the "expert guidance and advice" of Pace, initiated a study of junior college environments. The Junior College Environment Scale (JCES) is the result of this substantial research effort in 100 junior colleges in all regions of the continental United States. JCES contains 123 items distributed over 4 environmental scales.

All of the preregistration services, registration, and college environmental factors should be developed for and directed toward the academic success of college students. Probability of academic success for students is a primary concern among most professional counselors working in the junior college field. Researchers have not isolated and identified all the necessary and sufficient ingredients that effect academic success. Measures such as ACT scores had not generally been as reliable as high school grades in predicting success in college (37). High school grades have varied widely from institution to institution. Weighted formulas based on high school grades and ACT scores have generally been more reliable predictors than either alone.

The ACT had been used widely as a device to equate the relative academic potential of high school graduates.

To aid the pre-college student in a realistic assessment of his characteristics is important (36, p. 3). The evaluation of the effects of that aid on future plans has to be left to the individual. There had been an absence of information about the academic demands of various colleges. Hoyt (36) has sought to provide such information by formulating equations for predicting academic success at given colleges. Lunneborg (49) found that an equation for the University of Washington could have been "usefully applied" to other colleges in that state.

Junior colleges have had a record of low correlational measures between students' standardized test scores and college GPA's (36, p. 9). As one works closely with the comprehensive community junior college, he finds that this is not difficult to understand. Many students who would have scored poorly on an admission test may have achieved satisfactory grades because of the remedial courses which were available. The availability of vocational-technical courses would permit others to achieve grades not generally possible in college. Furthermore, the absence of high academic admission requirements would permit some to fail in college who simply did not have certain prerequisite achievements in high school, even though they may have had satisfactory test scores.

Due to the majority of junior college students declaring a transfer major, one finds it was reasonable that the ACT would be as valid in the junior college as in the university for those students registering during their first semester for courses in the transfer curriculum. Munday (53), in a study of comparative predictive validities of the ACT and two other scholastic aptitude tests, concluded "all three tests possess useful predictive validities." He reported a range of R's of .30 to .69 overall in predicting college freshman grades from ACT scores at fifteen colleges. In the absence of more valid instruments and the obvious relationship between GPA and ACT composite score (see table in Appendix) for technical-occupational majors, one may have reasonably assumed a validity and reliability sufficient to permit the utilization of such data. Hendrix (30) compared the performance of students in four occupational majors to non-majors enrolled in the same courses. He found "that technical majors . . . are not apparently discriminated against as compared with control students matched for sex and ACT scores." Hoyt (38, p. 21) found "ACT data have useful validities in predicting the academic success of occupational-terminal students."

Several conclusions would appear evident from this review of the related literature. The most obvious conclusion deals with the previously stated semantic confusion revolving around preregistration, orientation, student

advising, academic counseling, and other descriptive titles applied to highly similar services for incoming college freshman applicants. This confusion probably hinders communication about various techniques for performing preregistration advising. The absence of an evaluative criterion for preregistration advisement may account for the gross variations in practices of colleges and universities. Also, there are few behavioral objectives established for preregistration advisement. The few expressed objectives are worded in highly philosophical jargon or in vague generalities. The emphasis placed on the service, it may be assumed, results from the influence of the dean who is charged with the responsibility or from the desire of an administration which wishes to project a strong image of having a student oriented program.

The only clear cut evidence of something occurring as a result of preregistration advising appears in ratings of students and others who are affected by the service. They feel that preregistration was a worthwhile experience. As a result, students feel more satisfied. The conclusive evidence ends here. Counselors need to determine what behavior will be susceptible to changes through preregistration counseling treatment in order to have some basis for testing hypothesized improvements. From this kind of information, behavioral objectives expected to result from counseling can be established.

The comprehensive community junior college is a novel institution among traditional colleges and universities which emphasize preparation for the baccalaureate degree. Adjustment to new and innovative curricula by students is not complete. The two years of study usually spent in freshman and sophomore courses can no longer be so general as to fit almost any college major, for in many instances these two years may conclude the formal preparation for a technical career. The junior college is characterized by a fluid curricula which changes to meet the demands of modern society. The prospective student obviously needs help if he is to achieve satisfaction and success from his college experience. Preregistration advisement may be an important ingredient in satisfying that need.

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CHAPTER III

PROCEDURES FOR COLLECTING DATA

The usual requirements for admission as a full-time student to the college from which subjects for the study were drawn were scores from the American College Test (ACT), a high school transcript indicating graduation, a health report, and a completed application. In cases where the applicant had more than twelve semester hours of college credits, the high school transcript was not required, nor was the ACT for students who had completed six or more semester hours. Some exceptions to these general requirements were made whenever an applicant gained admission by individual approval. An example of a case for admission by individual approval would be an applicant who had difficulty furnishing foreign high school transcripts. Some applicants were admitted prior to taking the ACT, but the applicants had made payment in advance to take the ACT at a later date on campus. Applicants who had six semester hours or fewer of college credits were assigned a random number upon receipt of their application for admission; these random numbers provided the basis for assigning subjects to the groups to be mailed technical-occupational brochures and to the groups to be interviewed by a counselor.

Each day the applications received were randomly divided into two halves. One group of applicants was mailed a set of brochures on technical-occupational majors. The brochures (see Appendix B) were the same as those furnished through the school to interested prospects for technical-occupational programs. Three hundred forty-four applicants were each mailed a letter (see Appendix C) which requested them to declare an educational objective (major). The letters mailed to the applicants advised them of the persons to contact for testing and interviews for certain majors. Each applicant was advised that his preregistration might be delayed if he did not respond promptly. A reply card (see Appendix D) was furnished for their response.

Those full-time applicants who were eligible to be accepted for admission and who replied to the questionnaire comprised the original pool of potential subjects for this experiment. A second random assignment of the potential subjects was necessary to establish the experimental and control groups. One half of the individuals in the group receiving information about technical-occupational majors were randomly assigned to an experimental group as were one half of the individuals who did not receive the information. Applicants who were not mailed brochures were, likewise, randomly assigned to an experimental and a control group. Random numbers were employed in the assignment of applicants to the groups. The experimental and control

groups were potentially comprised of a combined total of one hundred and sixty-eight applicants.

The experimental group members were invited by letter to come for individual appointments. The appointments were scheduled to be thirty minutes in length. The students were interviewed by a counselor (the control groups were not interviewed). The interview gave the counselor an opportunity to provide the student with academic and personal guidance and information important for his adjustment to junior college life. The applicants assisted their counselor by providing information about their educational goals which was necessary to complete an advisement form. From these educational goals a list of courses in which the student was advised to register for the spring semester was determined. Each applicant then received a date and time to return in February for registration and fee payment. The applicants then proceeded to rooms where they responded to the statements of the Junior College Environment Scale (JCES). A member of the counseling staff and a proctor administered the test.

In order to control confounding variables such as those resulting from the subject's physical presence at the college, the control groups were invited in at an appointed time, but they met in a large group. The subjects in the control groups were presented with completed individual advisement forms. The form listed the courses in which the student was to register for the fall semester. Potential subjects in

the control groups were given an opportunity to complete a new reply card if they wished to change their course of study from that selected by their response to the initial letter. Those control group members desiring to change their major were provided a new advisement form listing the first semester courses required for their revised goal. Due to the absence of the extensive computer program required to provide this information mechanically, it was prepared manually. This impersonal preregistration advisement procedure was thought to be sufficiently similar to computerized advisement to support some limited conclusions. A mimeographed sheet of general information was provided during the group meeting. Miscellaneous information thought to be important to the applicants was incorporated on the sheet. The applicants were informed by receipt of a stamped form of a date and time to return for registration and fee payment. The applicants then completed the JCES.

A form was furnished which requested each member of the experimental and control groups to respond with indications of whether he had been interviewed individually by a counselor, or if he had seen the technical-occupational brochures which were made available to him by a bulletin board display. From the obtained information those subjects with these experiences were determined. Applicants whose prior experiences would contaminate the results obtained by the study were eliminated from the groups. Twenty-four members of the

control groups, found to have received prior counseling at the college, were dropped from the study. Twelve applicants in the groups not mailed brochures, but who had seen the brochures, were eliminated, as were 14 applicants who failed to keep their appointments for preregistration. The resulting experimental groups had a combined total of 56 subjects. The resulting control groups had a combined total of 58 subjects. There was thus a total of 114 in the study.

Technical-occupational majors were classified under three different types. The first of these types was certificate majors, which comprised those programs requiring less than two years to complete. The second type was the associate-in-applied-arts majors, which comprised those two-year occupational programs in business, health-related majors and skilled occupations which were not identified as being technical or science-related. The third type was the associate-in-applied-science majors, which comprised those two-year technical and science-related majors. A fourth group was typed as university-transfer majors. All subjects whose primary concern was accumulating credits for transfer toward a baccalaureate degree were classified under this fourth type of major.

The median score of those individuals who made "C" or better was determined from a sample of students in the four types of majors enrolled in the fall of 1967 (see Appendix A). Grade reports for students were used as the source for

the data. The ACT composite standard score, representing the median of those in the samples making 2.0 or better was the point at which the subjects in each of the four types of majors were rated high on probability of success. A four-point system was used and, therefore, a GPA of 2.0 or higher included all making a "C" average or better.

Changes of majors from those reported on the initial reply card were determined. The initial reply card was compared to the final registration summary to ascertain which subjects had changed their major. Course changes made during the schedule change period were recorded from the records of completed changes. Information about these two types of changes (changes of major and schedule changes) was maintained for each subject in the total sample.

The number of students in each of the experimental and control groups who failed to complete registration were recorded from the registration computer print-out. The number of students in each of the experimental and control groups who withdrew during the first eight weeks, and the number of mid-semester deficiency reports made by the subjects were, likewise, recorded.

Measures Employed

The American College Test (ACT) has widespread use for educational counseling and planning of students in the transition from high school to college. More than "1500 institutions" in the United States participate in the American

College Testing program (2, p. 3). Collection of the data employed in this study was effected at various national and residual test administrations. The American College Testing Program, Inc., scored the tests.

The Junior College Environment Scale (JCES) has been reported (1, p. 53) to have a reliability coefficient on each of four scales as follows: E 1 (.94), E 2 (.88), E 3 (.91), E 4 (.86). To develop these scales originally, 123 items were taken from 300 items submitted to students at 95 public junior colleges. Except in a few instances, items that correlated less than .50 with the total scale were eliminated. Other items were reported to have been eliminated if they had excessively small standard deviations or extreme means. These four scales, E 1 conventional conformity, E 2 internalization, E 3 maturation, E 4 humanism, represent the major dimensions which characterize the public junior college.

The resulting 123 items constituted the JCES in the form which was administered. The JCES was completed by the subjects in this study under the supervision of a member of the counseling staff. The JCES answer sheets were scored in the college computer center. The total score was used for the measure of the students' perception of the college environment.

Description of the Advisement Interview

Persons who had been accepted for full-time study at the college and assigned to the experimental groups were invited to the counseling center for a preregistration advisement interview with a member of the professional counseling staff. Those applicants who arrived at the appointed times were escorted to their counselor's office, and the counselor was furnished with the completed admission folder. The admission folder contained the student's application, ACT scores (if he had fewer than six hours college credit), and high school transcript. The counselor exchanged introductions with the applicant and determined if the student had received an interpretation of his ACT scores. If the student had not had such an interpretation and desired to have one, the counselor provided the information based on national, state, and local norms. The counselor frequently discussed the relevance of high school grades to achievement in college courses. The counselor was in a position to give general information as to college expenses, financial aid, student activities, part-time employment, college credits and grade points. The counselors may have found an opportunity to initiate preliminary counseling procedures for problems exhibited or discussed by the student.

The applicant at some point in the interview discussed his purpose in attending college. This usually involved discussion of an educational objective or college major.

The counselor, at this point, helped the student with reliable information relative to the student's potential for the manifest educational objective. This appraisal was based primarily upon three factors: (1) the high school transcript, (2) ACT scores, and (3) facts the student provided about himself.

Although the applicant may have had some limited idea of a baccalaureate degree program, he very often had no concept, or at best an extremely distorted one, of the technical-occupational opportunities available at the college level. There was, during many interviews, an opportunity for the counselor to help the applicant discover educational programs with which he had not previously been familiar. The applicant gained a new direction in certain instances by relating these opportunities to his interests and achievements. The counselor could provide information about university programs, transfer requirements, and occupations during the interview.

Some of the majors which the applicant selected may have required that he be tested or interviewed by members of the instructional faculty. The counselor directed these applicants to the instructor assisting students with the required tests and interviews. All applicants for both technical-occupational and transfer majors were advised as to the recommended first semester courses. There were frequent questions regarding the number of transfer hours a

student could accumulate while completing a technical-occupational major.

The interview was concluded by a brief explanation of freshman orientation. The applicant was told when orientation was to be held. The student was given two copies of his preregistration advisement form (see Appendix E) listing his major and courses that he would need for his first semester. The advisement form bore the signatures of the counselor and applicant. The two copies of the advisement form were taken by the student to the registrar's office where he was further advised about registration.

Description of Advisement Without the Interview

The subjects in the control groups were invited to come for advisement to a designated place on campus. They met in a large group with a counselor and an assistant. Preregistration advisement forms, which had been prepared by a counselor from the information supplied on the reply card and admission records, were furnished to the applicant. If the applicant wished to change his major, he completed a new reply card and the auxiliary testing, while the counselor amended his preregistration advisement form. If the applicant wanted to drop, add or change courses which had been recommended, he was permitted to request alteration of his preregistration advisement form, or he could mark out unwanted courses.

These applicants who were not interviewed (the control groups) were given a written notice about freshman orientation, the start of classes and other factual information. Upon completing the JCES they were directed to the registrar's office where they were further informed about registration procedures.

Treatment of Data

All college majors were classified into four categories: (1) certificate programs, (2) Associate in Applied Arts degree programs, (3) Associate in Applied Science degree programs, and (4) university transfer programs. Half of the subjects in each of the experimental and control groups had been mailed information about technical-occupational programs at the college.

Both the experimental and control groups received a questionnaire, notice, and reply card. They responded on the reply card by naming a college major, a minor, and a choice of senior college or university if the applicant's primary interest was to accumulate credit hours for transfer.

The subjects in the experimental groups either confirmed the original major or declared a new one while being interviewed by a counselor. The reply cards returned by the experimental group subjects were available to the counselor during the interview. The four types of majors of all subjects were tallied by the four treatments on a four by four

table (four types of majors by four treatments). Chi square was used to test the hypotheses about differences in the distributions of the types of college majors. The .05 level was considered significant.

The number of students rated high on probability of success in each type of major and the number rated low for each of the treatment groups (experimental and control) were tallied on a two by four table (two levels of success by four treatments) of probability of success. Chi square was employed to test the hypothesis about probability of success. The .05 level was considered significant.

Differences among means of scores on the Junior College Environmental Scale for the two experimental, and the two control groups were tested. For all hypotheses about perception of the college environment a simple analysis of variance was employed to test for significance at the .05 level. Where a significant F value was obtained a t test was employed to test for significance between the means.

Two by four tables were compiled indicating the number of changes of major, course changes during the schedule-change period, students failing to complete registration, withdrawals from school during the first half of the semester, and credit hours of deficiencies reported at mid-semester. Grade deficiency reports were categorized into three or fewer hours or more than three hours. All the tables allowed for categorizing the four treatment groups.

For each of the two by four tables chi square was employed to test the null hypothesis and a p of .05 was the required significance level.

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CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

This study dealt with the effects of a personalized preregistration advisement service compared to a more impersonal group advisement service. Receipt by applicants of a manually prepared advisement form with minimal verbal instructions and a mimeographed sheet of general information was considered impersonal enough to approximate the psychological effects which would have resulted from computerized advisement for the subjects in the control groups. Half of the sample of applicants from which the subjects in the experimental and control groups were assigned had been mailed sets of brochures on technical-occupational majors. Because of missing data, Tables I and IV have 104 subjects, and Table II has 103 instead of the 105 subjects who completed registration. All 114 subjects in the sample were included in the measures of the JCES and registration (Tables III and V). Nine subjects failed to complete registration. Tables VI and VII included the 105 subjects who completed registration. Table VIII included only the 95 subjects still enrolled at mid-semester.

Choices of College Majors

It was stated in Hypothesis I that there would be a difference among the four treatment groups of subjects in the distribution by types of majors chosen. It was further hypothesized that there would be a difference between the two groups of experimental subjects in types of college majors chosen. The difference was predicted to be caused by mailing one experimental group a set of technical-occupational brochures. Specifically, the experimental group who received information on technical-occupational majors in the form of brochures was expected to have more subjects choose technical-occupational majors than the experimental group who did not receive the brochures. This expected difference between the two groups of experimental subjects was not hypothesized to occur between the two control groups of subjects. One of the experimental groups and one of the control groups had been mailed technical-occupational brochures. The treatment variable was hypothesized to produce a significant difference between the combined experimental and control groups.

Table I contains the frequencies with which the types of college majors were chosen by the subjects in the experimental and control groups. The type of major recorded for each subject was determined from the final registration summary. Nine of the original 114 subjects did not complete registration. The remaining 105 subjects were reduced to

TABLE I
DISTRIBUTION OF TYPES OF MAJOR SELECTED FOR EXPERIMENTAL
GROUPS AND CONTROL GROUPS OF STUDENTS

Group	Interview	No	Interview	No	Total
	No	Interview		Interview	
	Brochures	Brochures	Brochures	Brochures	
Certificate	2 (1.9)	1 (1.8)	2 (2.1)	3 (2.2)	8
Applied Arts	1 (1.0)	1 (0.9)	1 (1.0)	1 (1.1)	4
Applied Science	5 (6.3)	6 (5.8)	7 (6.8)	8 (7.3)	26
Transfer	17 (15.9)	15 (14.6)	17 (17.1)	17 (18.4)	66
Total	25	23	27	29*	104

*The data about the major of one subject in the fourth group was not known.

104 by the absence of data for one subject. Over 39 per cent of the subjects mailed brochures selected technical-occupational majors, but only 33 per cent of the other subjects selected these types of majors. In the table below, the expected frequencies appear in parentheses just under the obtained frequencies.

The chi square calculated from the data in Table I equaled 1.492, which was not significant for 9 degrees of freedom. It was not possible to reject the null hypothesis because the differences in the distributions of college majors selected by the various treatment groups of subjects

could easily have occurred by chance. There was no justification for further testing of the hypotheses regarding choices of college major; therefore, all research hypotheses about these choices were rejected.

Probability of Success

It was stated in Hypothesis II that there would be differences in the proportions of the four groups of applicants with regard to their probability of success in educational objectives. Table II contains the frequency distributions

TABLE II
FREQUENCIES DEPICTING THE RELATIONSHIP BETWEEN
PREREGISTRATION ADVISEMENT AND PROBABILITY
OF SUCCESS RATINGS

Group	Interview	No	Interview	No	Total
	No	Interview		Interview	
	Brochures	Brochures	Brochures	Brochures	
Rated high	7 (4.6)	6 (4.2)	3 (4.8)	3 (5.3)	19
Rated low	18 (20.4)	17 (18.8)	23 (21.2)	26 (23.7)	84
Total	25	23	26*	29*	103

*Information about the major of one subject in the last group was missing and one subject in group three had not taken the ACT.

of the ratings of probability of success in educational objective for each of the four groups of subjects. Expected frequencies appear in parentheses just below the obtained frequencies.

The chi square for these data equaled 5.057. This was not significant at the .05 level for 3 degrees of freedom. The ratings on probability of success were distributed among the four treatment groups in a way that could have easily occurred by chance.

Perception of the College Environment

In Hypothesis III it was stated that there would be a significant difference among the means for the four groups of subjects on the Junior College Environment Scale (1). It was further hypothesized that neither the mean scores of the two experimental groups of subjects nor the mean scores of the two control groups of subjects would differ significantly. A significant difference in means on the JCES was expected to be found between the combined experimental groups and the combined control groups. A test of the hypothesis regarding the differences among the mean scores of the four treatment groups of subjects using a simple analysis of variance (2, pp. 265-271) revealed that the variation among the four treatment groups was not significant. The results of this analysis are shown in Table III.

The F score of .251 was not significant at the .05 level. The null hypothesis could not be rejected. There was no significant difference among the four treatment groups of subjects in their perception of the college environment. Since this was true, there was no justification for testing

TABLE III
ANALYSIS OF VARIANCE OF SCORES FOR THE STUDENTS'
PERCEPTION OF THE COLLEGE ENVIRONMENT

Variation	df	Sum of Squares	Mean Squares	F	P
Between groups	3	216	72.00	.251	N.S.*
Within groups	110	32689	286.75
Total	113	32905			

*Not significant.

differences between the mean scores of the various groups for significance.

Changes of College Major

It was predicted in Hypothesis IV that a difference in the four groups of subjects would result from the experimental group subjects making more changes of major than those subjects in the control groups. Each subject had responded by a reply card declaring a proposed major. It was expected that the interview with a counselor would produce a higher incidence of changes of major among the experimental groups of subjects. The frequencies of individuals changing and retaining their original choices are shown in Table IV. Changes were determined by comparing the major for which each subject was enrolled on the final registration summary to the major he had originally declared. The data about change of major were missing for one subject in the last treatment group. The chi square based on these data was

TABLE IV
DISTRIBUTION OF CHANGES OF MAJOR FOR EXPERIMENTAL GROUPS
AND CONTROL GROUPS OF STUDENTS

Group	Interview	No	Interview	No	Total
	No	Interview		No	
	Brochures	Brochures	Brochures	Brochures	
Changed major	3 (1.9)	0 (1.8)	4 (2.1)	1 (2.2)	8
No change	22 (23.1)	23 (21.2)	23 (24.9)	28 (26.8)	96
Total	25	23	27	29*	104

*The major was not known for one subject in this group.

1.886. With 3 degrees of freedom this value was not significant at the .05 level. Therefore, the null hypotheses could not be rejected. Expected frequencies appear in parentheses just below the obtained frequencies in the table.

The students in the two experimental groups which were interviewed individually by a counselor made seven of the eight recorded changes of major. The number of students who changed major was too small to conclude that the differences did not occur by chance. All research hypotheses regarding changes of major were rejected.

Registration

In Hypothesis V it was predicted that the numbers of applicants failing to complete registration would also show a significant difference by treatment groups, with the

experimental groups of subjects having fewer members who failed to complete registration than the control groups. The subjects to whom were mailed technical-occupational brochures were not expected to differ from their experimental or control counterparts. To determine if the individual pre-registration interviews were related to an increase in the proportion of applicants who completed registration, chi square was used to test for significance. The distributions which were obtained in this test can be seen in Table V.

TABLE V
FREQUENCIES DEPICTING THE RELATIONSHIP BETWEEN
PREREGISTRATION ADVISEMENT AND COMPLETION
OF REGISTRATION

Group	Interview	No	Interview	No	Total
	No Brochure	Interview No Brochure		Interview No Brochure	
Registered	25 (23.9)	23 (24.9)	27 (27.6)	30 (28.6)	105
Not registered	1 (1.1)	4 (2.1)	3 (2.4)	1 (2.4)	9
Total	26	27	30	31	114

The method of preregistration advisement and registering or failing to register comprised the two variables. Expected frequencies appear in parentheses just below the obtained frequencies in the table.

The chi square value resulting from this test, 3.275 with 3 degrees of freedom, was not significant at the .05 level.

There is insufficient evidence to support the hypothesis that either the brochures or the individual interviews were responsible for more applicants completing registration. The two groups of applicants to whom sets of technical-occupational brochures were mailed had a higher percentage completing registration than the two groups of applicants who were not so treated. This difference, however, cannot be attributed to anything other than chance.

Course Changes After Registration

In Hypothesis VI it was predicted that the experimental groups of subjects would have proportionately fewer course changes through the schedule change process. Fewer schedule changes would appear to indicate that the preregistration advisement by individual interview with a counselor had produced a selection of courses which did not make the student feel that it was necessary to change courses as soon as registration was completed. Chi square was used to determine whether or not differences in the proportion of students in the various groups were related to the method of preregistration advisement or to the receipt of technical-occupational brochures. The distributions which were obtained in this test can be seen in Table VI. The expected frequencies appear in parentheses below the obtained frequencies.

TABLE VI
 FREQUENCIES DEPICTING THE RELATIONSHIP BETWEEN
 PREREGISTRATION ADVISEMENT AND COURSE
 CHANGES

Groups	Interview No Brochures	No Interview No Brochures	Interview Brochures	No Interview Brochures	Total
Course change	7 (7.6)	10 (7.0)	5 (8.2)	10 (9.2)	32
No change	18 (17.4)	13 (16.0)	22 (18.8)	20 (20.8)	73
Total	25	23	27	30	105

The chi square value for this test was 4.273 with 3 degrees of freedom, which was not significant at the .05 level. Only 19 per cent of the students who received pre-registration advisement in individual interviews with a counselor and who also were mailed the sets of technical-occupational brochures made course changes. Forty-three per cent of the group of students who were neither interviewed nor mailed the brochures made course changes. There is a marked transition through the four treatment groups from 19 per cent to 43 per cent, but the evidence did not permit the elimination of the likelihood that the differences indicated in Table VI could be a chance occurrence.

Withdrawal from College

A record of all withdrawals from college is maintained in the office of the college registrar. It was postulated in Hypothesis VII that when the withdrawals during the first eight weeks of the semester were recorded that the experimental groups of students would be found to have fewer withdrawals than the control groups of students. If the advisement interview with a counselor had produced better adjustment to the college environment than an impersonal advisement then it would be reasonable to conclude that fewer of the interviewed students would have withdrawn during the period of the study. A chi square did not, however, reveal any significant difference between the number of experimental and control subjects withdrawing from college during the first eight weeks of the semester. The data relevant to this hypothesis can be seen in Table VII. The expected

TABLE VII

DISTRIBUTION OF WITHDRAWALS FROM COLLEGE FOR EXPERIMENTAL
GROUPS AND CONTROL GROUPS OF STUDENTS

Group	Interview	No	Interview	No	Total
	No	Interview		Interview	
	Brochures	Brochures	Brochures	Brochures	
Withdrew	2 (2.4)	2 (2.2)	3 (2.6)	3 (2.9)	10
Did not withdraw	23 (22.6)	21 (20.8)	24 (24.4)	27 (27.1)	95
Total	25	23	27	30	105

frequencies appear in parentheses below the obtained frequencies.

The chi square resulting from the analysis of the data was .171, which was not significant for 3 degrees of freedom. The null hypothesis could not be rejected. All research hypotheses concerning withdrawals from college were rejected.

Mid-Semester Grade Deficiencies

In Hypothesis VIII it was predicted that there would be a significant difference among the groups of subjects in the number of course grade deficiencies reported at mid-semester. Those students receiving grade deficiency reports in three credit hours or less were in one category, while those students receiving reports of grade deficiencies in more than three credit hours comprised the other category. It was hypothesized that the differences among groups would be such that the students who had been interviewed by a counselor for preregistration advisement would receive fewer course grade deficiencies at mid-semester than would the students in the control groups. This prediction grew out of the idea that the counseling would produce a stronger commitment by the student to his educational goal. In Table VIII can be seen the distributions of the two degrees of course grade deficiencies for the students in the four treatment groups.

The chi square value resulting from this test, 1.760, was not significant at the .05 level. There were fewer

TABLE VIII
 DISTRIBUTION OF CREDIT HOURS OF GRADE DEFICIENCIES
 REPORTED AT MID-SEMESTER FOR EXPERIMENTAL GROUPS
 AND CONTROL GROUPS OF SUBJECTS

Group	Interview	No	Interview	No	Total
	No	Interview		Interview	
	Brochures	Brochures	Brochures	Brochures	
3 or less	19 (17.4)	14 (15.9)	19 (18.2)	20 (20.5)	72
More than 3	4 (5.6)	7 (5.1)	5 (5.8)	7 (6.5)	23
Total	23	21	24	27	95*

*Ten subjects had withdrawn from college prior to mid-semester.

deficiencies reported for students who had been counseled, but the difference was not sufficient to reject the null hypothesis. The research hypothesis that there would be a difference among the groups of students was rejected.

In summary, none of the criterion measures were significantly associated with the treatments employed in this study. The groups of subjects who were interviewed by a counselor for their preregistration advisement did have proportional differences in the predicted directions in several areas. The experimental groups had a greater proportion of subjects rated high on probability of success than did the control groups. As expected, more of the counseled students changed their majors. If the counseling were responsible for the differences, such changes of major

would appear to be derived from the insights gained during the interview. The counseled students had proportionately less course changes during the schedule change period which followed registration. A smaller proportion of the counseled students received course deficiency notices for more than three credit hours of work than did the control groups of students. Even with the small differences in these four highly desirable criterion measures, it must be reiterated that differences in these distributions could easily have occurred by chance alone.

The lack of significance, obtained for the eight measures utilized, could have been due to the small minority of students who can be helped to abandon plans for four-year degrees when there is a low probability of success. The cultural commitment to such programs is high among students of all ability levels. Also, fortunately, the quality of counseling now provided through the high schools is higher than at any previous time and students of marginal or low ability may be better equipped to persist and to seek remedial help as needed in pursuit of their educational goals. In addition, the commitment to the students' major fields of study may have been so high that expectations of immediate changes were unreasonable.

Three criterion measures with only small group to group differences were (1) the mean scores on the Junior College Environmental Scale, (2) the proportion of applicants

returning to complete registration, and (3) the proportion of students withdrawing during the first eight weeks of the semester. These differences were even more slight than those obtained for the other criterion measures.

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CHAPTER V

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this study was to determine the effects of an individual preregistration advisement interview as compared to an impersonal, large-group advisement for first semester college freshmen. Eight behavioral indices were employed to measure the relative effects of the two methods of advisement. The potential of economically providing preregistration advisement by an impersonal computerized method also gave the study contemporary importance.

A review of some related studies had indicated that affective ratings and evaluations of a counseling interview conducted for preregistration advisement provided significant benefits as perceived by counseled students. A series of criterion measures which were expected to yield inferences of highly desirable behavioral modification, was selected.

The population for this study consisted of those persons applying for spring semester admission to a junior college in a large metropolitan area. Three hundred forty-four applicants were mailed letters requesting them to declare a major field of study. Data were collected on 168 potential

subjects who met the requirements for admission. Fourteen applicants failed to keep their appointment for preregistration. Twenty-eight members of the control groups found to have had prior counseling at the college were dropped from the study. Twelve applicants in the groups not mailed brochures, but who had seen them through other sources, were eliminated. The experimental and control groups were comprised of those 114 subjects retained after the elimination of unacceptable applicants.

Half of the 344 applicants had been mailed technical-occupational brochures. The brochures provided information about college technical-occupational majors. The experimental and control subjects were assigned at random from these groups. The subjects in the experimental groups received an individual counseling interview while the groups of control subjects were given written forms listing recommended courses, large group instructions, and mimeographed sheets of information. The experimental treatment was predicted to produce differences from the control method in eight behavioral indices.

The applicants selected for the study had responded with a reply card indicating name, address, social security number and choice of a major field of study (see Appendix D). Total scores on the JCES and composite scores from the ACT were collected. Each student filled out a form indicating if he had previously been interviewed personally by a college

counselor, or if he had been exposed to technical-occupational brochures (see Appendix G). Further data collection provided an initial registration summary, schedule change forms, mid-semester deficiency reports and withdrawal notices.

Chi square was used to test for significant differences in proportions of students selecting various types of majors in the four treatment groups. The mean scores on the JCES of the experimental and control groups were tested for significant differences by an analysis of variance. Chi square was employed to determine if other observed differences were significant. Differences occurring among the following measures of the experimental and control groups were examined: probability of success ratings, changes of major, failures to complete registration, course changes, withdrawals and course deficiencies. Calculations were computed manually. The .05 level was considered to be the criterion of significance in each case.

It was stated in Hypothesis I that there would be a significant difference among the four groups of applicants in the distribution of types of majors chosen. A higher proportion of students selecting technical-occupational majors was expected to result from providing individual pre-registration advisement interviews and technical-occupational brochures to college applicants.

In Hypothesis II, the prediction was advanced that significant differences would be found in the proportion of

students rated high on probability of success. Increased occurrences of high probability of success ratings were expected as a result of students receiving an individual pre-registration advisement interview.

It was stated in Hypothesis III that there would be a significant difference between the means of the four groups' scores on the JCES. This difference was hypothesized to be a result of the experimental groups achieving higher mean scores.

In Hypothesis IV, it was predicted that there would be a difference among the four groups of applicants in the proportion of students changing majors between the receipt of the initial reply card and the completion of registration. The difference was predicted to result from the experimental subjects making more changes of major than the control subjects.

It was stated in Hypothesis V that there would be a significant difference among the four groups of applicants failing to complete registration. The experimental groups, it was predicted, would have significantly fewer applicants failing to complete registration than would the control groups.

In Hypotheses VI, VII, and VIII it was predicted that subjects in the experimental groups would make significantly fewer schedule changes, would make fewer withdrawals from

school, and would receive significantly fewer mid-semester course deficiencies than subjects in the control group.

Findings

The findings of the present study were the following:

1. Mailing of technical-occupational brochures to college applicants and providing them with individual pre-registration counseling was not significantly associated with these students' choices of college majors. The types of majors selected by students advised in large groups were not significantly different from individually advised students.
2. An individual preregistration advisement interview with a counselor did not significantly affect the student's probability of success in his educational objectives. Students advised in large groups did not differ significantly in ratings of probability of success from students who were advised individually.
3. A preregistration counseling interview did not have any significant effect on an applicant's perception of the college environment.
4. There was no difference which could be concluded as statistically significant in the proportion of interviewed students and non-interviewed students who changed their major.
5. Neither the preregistration advisement interview with a counselor nor the mailing of technical-occupational

brochures had any significant effect on the decision by students to complete registration.

6. There was no significant difference in the proportion of subjects in the experimental and control groups making course changes after registration.

7. Withdrawing from school during the first half of the semester was unrelated to the type of preregistration advisement provided the student. Observed differences between groups of students were not significant.

8. The difference in proportional differences of students receiving mid-semester course deficiencies among the various treatment groups were small and inconclusive. The hypothesis that a significant difference would occur was rejected.

Conclusions

These findings would seem to allow the following conclusions within the framework of the investigation.

1. Mailing technical-occupational brochures to applicants does not encourage the recipients to initially select technical-occupational majors.

2. Large group meetings, pre-prepared advisement forms and mimeographed information sheets provided for applicants are as effective as a thirty-minute interview in encouraging students to select technical-occupational majors.

3. Individual preregistration advisement interviews will not result in students selecting college majors which are more consistent with their measured academic potential. The method of preregistration employed is unrelated to the students' probability of success during his first eight weeks in college.

4. Students' perception of the college environment cannot be altered by an individual preregistration interview more than by group advisement.

5. The percentages of college freshmen changing their major between the time they apply for admission and the time they complete their initial registration may not be altered by providing them with individual counseling interviews during preregistration.

6. A student's decision to complete registration will not be modified by the method of providing preregistration advisement. Either the causes of a student's decision not to complete registration are not affected by the process of preregistration, or there is no preferential benefit to be gained from an individual advisement method over a group method when withdrawal during the first eight weeks of the semester is the criterion.

7. The proportion of students making course changes after registration may not be reduced by providing individual preregistration interviews to freshman applicants.

8. Preregistration advisement in large groups will be as effective as individual interviews with a counselor in reducing early withdrawals by first semester freshmen.

9. Students benefit as much from group advisement as from individual advisement interviews when the number of course deficiency notices received at mid-term is the criterion.

In summary, measures of the type employed in this study cannot be used to justify continuance of thirty-minute individual advisement interviews. Providing applicants with pre-prepared advisement information in a large group meeting will be as effective as an individual interview in significantly modifying the students' behavior. Likewise, technical-occupational brochures should not be mailed to college applicants with the expectation of achieving significant behavioral changes during the first half of their initial semester in college.

Recommendations

On the basis of the findings of the present investigation several recommendations are offered.

1. Because benefits, as perceived by students, were found in other studies to result from individual preregistration advisement interviews, it is recommended that the search for behavioral indices be continued. In other studies, students have expressed the belief that a thirty-minute

interview is not of adequate length, therefore, the behavioral effects of longer periods of exposure between counselor and student should be investigated.

2. In any replication of this study, or in similar research involving behavioral changes resulting from interpersonal experiences, the longitudinal effects over a four- or eight-semester period should be considered. As other researchers have previously observed, the effects of such experiences may be of a latent nature.

3. It is recommended that computer programs be developed to specify courses and academic requirements for various college majors selected by entering freshmen. This data should be furnished to students either in groups or individual advisement sessions. The choice between group and individual advisement sessions should depend on other criteria than that utilized in this study.

4. Comparisons of group and individual methods of pre-registration advisement should be investigated employing affective measures.

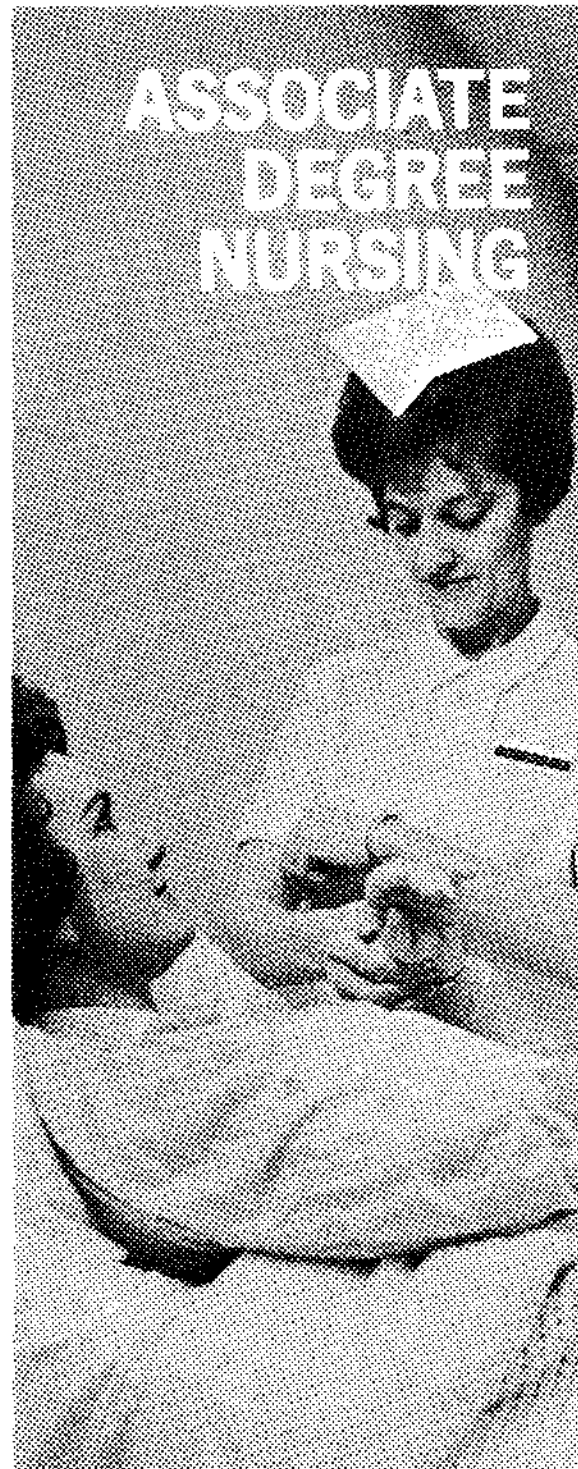
TABLE IX

DISTRIBUTION OF STUDENTS' GPA BY TYPE OF MAJOR AND ACT COMPOSITE SCORE

Cert. Programs		Assoc. Appl. Sci.			Assoc. Appl. Arts			Transfer Majors			
GPA -2.0	ACT Comp. N = 84	GPA 2.0+	GPA -2.0	ACT Comp. N = 161	GPA 2.0+	GPA -2.0	ACT Comp. N = 90	GPA 2.0+	GPA -2.0	ACT Comp. N = 201	GPA 2.0+
0	26-30	1	0	26-30	1	0	26-30	1	1	26-30	20
2	21-25	1	1	21-25	18	5	21-25	7	10	21-25	50
7	16-20	12	15	16-20	28	7	16-20	27	32	16-20	52
9	11-15	18	34	11-15	33	12	11-15	19	27	11-15	8
16	6-10	17	15	6-10	9	6	6-10	5	1	6-10	0
2	1-5	0	7	1-5	0	1	1-5	0	0	1-5	0

APPENDIX B

TECHNICAL-OCCUPATIONAL BROCHURE



EL CENTRO COLLEGE
of the
DALLAS COUNTY JUNIOR COLLEGE DISTRICT

TECHNICAL-OCCUPATIONAL BROCHURE

ASSOCIATE DEGREE NURSING

THE NEED FOR NURSES

The demand for Registered Nurses is greater today than at any time in the history of our country. Dallas County's growing need already exceeds the present supply. Those who choose nursing as a career may expect many professional opportunities and can provide community services inherent in the development of the profession.

THE PROGRAM OF THE COLLEGE

You can become a Registered Nurse through two years of college study.

Prepare for a career as an R.N. through the two-year nursing program offered at El Centro College, of the Dallas County Junior College District. At the completion of this intensive academic program, which combines hospital clinical experience with campus classroom and laboratory work, the student is awarded an Associate of Applied Science degree and is entitled to write the National Test Pool Examination to qualify as a Registered Nurse (R.N.).

This program of study, open to men and women, provides a balance of science and general education courses in preparation for nursing. All are taught on the college campus.

The student receives his clinical laboratory experience in several hospitals in the greater Dallas area while under the guidance of the college faculty. These experiences are coordinated with the classroom topics under discussion throughout the two years.

For further information and application materials please write or call:

Chairman, A. D. Nursing
El Centro College
Main and Lamar
Dallas, Texas 75202
RI 2-1411, Ext. 304

A suggested two-year curriculum follows:

TUITION AND FEES

Students enrolled in nursing will be subject to the same tuition and student activity fees as all registered full-time students.

TUITION, Full-Time Student
per Semester \$50.00

STUDENT ACTIVITY FEE, Full-Time
Student per Semester \$7.00

LABORATORY FEE, per Lab Course \$2.50-7.50

PART-TIME FEES, per Credit Hour \$ 5.00

ESTIMATED PROGRAM EXPENSES

Approximate total cost of the Associate Degree Nursing program, if completed in two years, includes:

Tuition and fees	\$ 345.00
Books and school needs	\$ 585.00
Uniforms (includes caps and shoes)	\$ 70.00
TOTAL	\$1,000.00

These expenses do not include room, board, transportation or clothing costs.

Students should plan to have \$200 available for initial expenses at the time of enrollment. Books and uniforms may be purchased through the campus bookstore.

Students in nursing are eligible for regular college scholarships and loans.

ASSOCIATE DEGREE NURSING

THE NEED FOR NURSES

The demand for Registered Nurses is greater today than at any time in the history of our country. Dallas County's growing need already exceeds the present supply. Those who choose nursing as a career may expect many professional opportunities and can provide community services inherent in the development of the profession.

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This program of study, open to men and women, provides a balance of science and general education courses in preparation for nursing. All are taught on the college campus.

The student receives his clinical laboratory experience in several hospitals in the greater Dallas area while under the guidance of the college faculty. These experiences are coordinated with the classroom topics under discussion throughout the two years.

For further information and application materials please write or call:

Chairman, A. D. Nursing
El Centro College
Main and Lamar
Dallas, Texas 75202
RI 2-1411, Ext. 304

A suggested two-year curriculum follows:

FIRST YEAR

Fall Semester

Nursing 131 — Orientation (1 hr. lecture per week)	1
Nursing 132 — Fundamentals (3 hrs. lecture, 9 hrs. lab. per week)	6
English 101 — Composition and Expository Writing	3
Psychology 105 — Introduction to Psychology	3
Biology 131 — Anatomy and Physiology	4
Physical Ed. 126 — Body Mechanics	1
	<hr/> 18

Spring Semester

Nursing 133 — Mat. and Child Health (3 lecture, 15 lab.)	8
English 102 — Composition and Literature	3
Psychology 201 — Human Growth and Development	3
Chemistry 101 — General Chemistry	4
Phys. Ed. — Elective	1
	<hr/> 19

Summer Semester

Nursing 134 — Med.-Surg. I (0 lecture, 24 lab.)	3
Biology 132 — Microbiology	3
Sociology 201 — Introduction to Sociology	3
	<hr/> 9

SECOND YEAR

Fall Semester

Nursing 231 — Psychiatric (4 lecture, 18 lab.)	5
Nursing 232 — Med. Surg. II (4 lecture, 18 lab.)	5
Government 201 — American Government	3
History 101 — History of U. S.	3
Physical Ed. — Elective	1
	<hr/> 17

Spring Semester

Nursing 233 — Med. Sur. III (4 lecture, 12 lab.)	8
History 102 — History of U. S.	3
Humanities — Elective	3
Phys. Ed. — Elective	1
	<hr/> 15

Summer Semester

Nursing 234 — Medical Surg. IV (4 lecture, 18 lab.)	10
Nursing 235 — Seminar (4 meetings)	2
Government 202 — American Government	3
	<hr/> 15

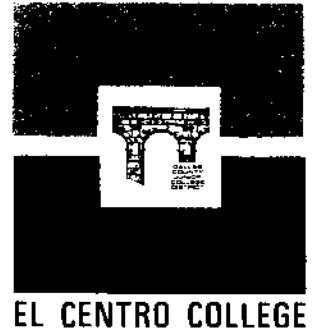
ADMISSION REQUIREMENTS

1. Graduation from an accredited high school with at least 15 units of credit including the following required subjects:
 - English 3 credits
 - Mathematics 2 credits
 - Social Science 2 credits
 - Science (Chemistry is strongly recommended) 2 credits
- Recommended subjects include:
 - English 1 credit
 - Foreign Language 2 credits
2. Medical examination
3. Applications to the College and to the Division of Associate Degree Nursing
4. Interview with a member of the A. D. Nursing faculty
5. Admission to the College for full-time academic study

VARIATIONS OF THE PROGRAM

Students who find it necessary, because of the intensity of the program, to spread the requirements over a longer than two-year period are encouraged to discuss their program plans with a member of the Associate Degree Nursing faculty early in their college career.

Students wishing to transfer credits from other colleges will have the course work evaluated on an individual basis.



APPENDIX C

LETTER TO APPLICANTS

As an applicant to El Centro, we request that you thoughtfully consider selecting a realistic program of study (college major). There is no general course of study in college. All college degrees have specific course requirements. If you can decide on the type of job you want, then you may select the college program that prepares you for that job.

Many college graduates will not go on to receive higher degrees. You can graduate from El Centro College in two years with a valuable skill if you select a major in the technical-occupational field. Technical-occupational students taking twelve hours or more may be certified as full time students for selective service classification. Consider your choice of a major carefully, and be sure it has courses in the program which use your best abilities and in which you will be interested.

You must take university transfer courses if you plan to gain admission to a professional or graduate school for study longer than four years. Students who finish four years of college with a "B" or higher grade average can probably gain admission to graduate school. You must take university transfer courses if the occupation you plan to enter requires legal or professional certification which has a prerequisite bachelors degree. Also, some companies require a four year degree for certain occupations. Contacts with prospective employers should help you decide if you need a four year degree or not.

Enclosed you will find a listing of the most common college majors. Please complete the reply card and mail it immediately. Your pre-registration advisement can be seriously delayed if you do not respond at once.

Sincerely,

EL CENTRO COLLEGE
UNIVERSITY TRANSFER MAJORS

(Usually two years toward these majors can be completed at El Centro)

Social, Religious &
Education

Elementary Educ.
Home Economics
Special Education
Phys. Education
Psychology
Secondary Education
Sociology
Theology & Religion
Library & Archival
Science
Industrial Arts

Administrative, Business, &
Political

Advertising
Pre-Law
Public Admin.
Marketing
Political Science
Government
History
Accounting
Business & Commerce
Economics

Scientific

Anthropology
Archeology
Astronomy
Biology
Botany
Chemistry
Entomology
Geography
Geology
Math. & Statistics
Meteorology
Oceanography
Physics
Zoology

Medical & Health

Pre-Dental
Dietetics
Pre-Medical
Medical Tech.
Pre-Mortuary Sci.
Pre-Optometry
Pre-Osteopathy
Pharmacy
Veterinary Med.
Nursing (4 yr.)
Occupational Therapy
Physical Therapy

Arts & Humanities

Art & Sculpture
Drama & Theater
English & Eng. Lit.
Foreign Lang. & Lit.
Journalism
Music
Philosophy
Speech

Engineering

Architectural
Electrical
Mechanical
Chemical
Industrial
Petroleum
Civil
Aeronautical

Agriculture & Forestry

Agriculture
Fish & Game Management
Forestry

Note: These college majors generally require the student to be average or above in three or more of the following five fields: (1) English - Composition and Literature; (2) Mathematics - Algebra, Trigonometry, Geometry or Pre-Calculus; (3) Sciences - Either Biology, Chemistry, Geology or Physics; (4) Social Sciences - American History and State and Federal Government; (5) Foreign Languages - Either Spanish, French, or German. Most of the course work at El Centro for University transfer majors will be in these five fields.

EL CENTRO COLLEGE
 TECHNICAL AND OCCUPATIONAL MAJORS
 (Programs Designed for Job Opportunities in the Dallas Area)

<u>Business Occupations</u>	<u>Semesters* to Completion</u>	<u>Certificate or Degrees**</u>
Bookkeeping	2	Certificate
Credit & Collection	2	Certificate
Data Processing Equip. Opr.	2	Certificate
Date Processing Programmer	4	AAS
Key Punch (course)	1 (part time)	Certificate
Mid-Management	4	AAS
Office Supervision	4	AAA
Restaurant Management	4	AAS
Secretarial Science	4	AAA
Secretarial Science	2	Certificate
<u>Health Related Majors</u>		
Associate Degree Nursing	4+Summers	AAS
Central Service Tech.	1	Certificate
Dental Assisting	4	AAS
Medical Records Technician	4	AAA
Medical Secretary	4	AAA
Nurse Aide	1	Certificate
Operating Room Technician	1+Summer	Certificate
Radiologic Technology (X-Ray)	4	AAA
Respiratory Therapy (Inhalation)	4	AAA
Vocational Nursing	2+Summer	Certificate
<u>Science and Related Technical Majors</u>		
Architectural Technology	4	AAS
Chemical Technology	4	AAS
Drafting and Design Tech.	4	AAS
Electronics Technology	4	AAS
<u>Skilled Occupations</u>		
Culinary Arts	4	AAS
Fire Protection Technology	4	AAA
Library Assistant	4	AAS
Pattern Drafting & Draping	4	AAA
Police Science	4	AAS
Television and Radio Repair	2	Certificate

* A semester is 4 1/2 months of full time study.

**AAA - Assoc. in Applied Arts Degree; AAS - Assoc. in Applied Science Degree.

- Notes: (1) Fire Protection Technology and Police Science are open only to persons presently employed in these fields.
 (2) It is not usually possible to accumulate two full years of college transfer credit in these majors. Some programs have no courses that will be accepted for transfer while other programs may be accepted for some credit at senior colleges. The primary emphasis in Technical and Occupational majors is the vocational preparation of the student and not transferability of the course credits to a senior college.

NOTICE

If you plan to enter the following College Majors, you will need to contact the instructor listed below as soon as possible.

<u>Major</u>	<u>Instructor</u>	<u>Phone</u>	
Data Processing	Mr. Scott Long	RI2-2151	Ext 320
Mid-Management	Mrs. Margaret Parsons	"	" 282
Office Supervision	Mrs. Pat Plocek	"	" 284
Nursing (RN)	Mrs. Geraldine White	"	" 304
Radiologic Technology	Mr. Tom McGrew	"	" 338
Vocational Nursing	Mrs. Marilyn Martin	"	" 351
Library Assistant	Mr. Tim Wilkinson	"	" 214
Credit & Collection	Mr. Bob Felder	"	" 390
Operating Room Tech.	Miss Karen Sheets	"	" 327

APPENDIX D

INSTRUCTIONS

NOTICE

Completion and return of the enclosed reply card indicates your intention to appear upon request between the dates of January 6th and January 24th. You will need to allow about two hours for advisement and testing. This notice in no way confirms or denies your acceptance to El Centro College.

REPLY CARD

Name _____

Social Security Number _____

Mailing Address _____

City _____ State _____ Zip _____

My College Major will be _____

My Second Major or Minor _____

While at El Centro, (Check one of the following):

I Plan to Prepare Myself for a Job.

I Plan to Accumulate College Credits for Transfer.
(Transfer to which University? _____)

APPENDIX E

PREREGISTRATION ADVISEMENT FORMS

Name _____ Date _____
Last First Middle
Social Security No. _____
_____ University Transfer _____ Technical-Vocational
Major _____
Major _____
To: _____ University
Course and No. _____ Sequence No. _____ Comments: _____

Signed: _____ Student
_____ Advisor

APPENDIX F

INFORMATION

1. If one or more of the courses you are advised to take for the Spring Semester are full when you come back for registration, counselors will be available to assist you in selecting alternates.
2. You may add any of the following courses to your advisement form now:

<u>Course & No.</u>	<u>Seq. No.</u>	<u>Do not copy this on your card</u>
SPE 201	2144	Forensic Wrksp (Debate)
MUS 150	3601	Chorus
MUS 160	3602	Band
MUS 121		Private Music Lessons
PEH 122M	4722	Men's Gymnastics
PEH 123M	4723	Men's Beg. Swimming
PEH 127M	4727	Men's Bsk. & Vol. Ball
PEH 127W	4728	Women's Bask. & Vol. Ball
PEH 122W	4742	Women's Gymnastics
PEH 123W	4743	Women's Beg. Swimming
PEH 125W	4745	Figure Training
PEH 121	4761	Folk Dance
PEH 124	4762	Ballroom Dance

3. The maximum tuition at El Centro College is \$50.00 per semester. Laboratory Science, private music lessons* and Key Punch have additional fees.

Full time students may estimate their approximate costs as follows:

\$ 50.00	Tuition
10.00	approximately for fees
40.00	approximately for books
<u>\$100.00</u>	approximate total

*Music lessons are \$35.00 or \$55.00 per semester.

4. Because of low grades, low A.C.T. scores or high school course deficiencies, many students are required to take remedial courses. These courses are numbered with a zero in the first digit. For example, GSP 090, MTH 093

or GSM 091 are remedial courses. These courses will count in your grade point average at El Centro. You will not receive credit toward graduation from El Centro for these courses. These remedial courses will not be accepted for credit by other Colleges or Universities.

5. Students who have an A.C.T. composite score below 12 are admitted on scholastic probation and are required to take 12 hours of remedial courses for the first semester. The second semester courses will be determined from the performance in the remedial courses. Some students with unusual aptitudes may be permitted to take specific technical vocational courses.
6. Veterans, students needing loans, and scholarship applicants should go to the Financial Aid office on the mezzanine and fill out any necessary forms as soon as possible.
7. Take your pink and yellow cards to the registrar's office on this floor and obtain your priority date for registration as soon as you are dismissed.
8. Your counselor will help you plan your two years of study at El Centro at your convenience after the semester begins. Come in to make an appointment. You may use our counseling service for any personal or academic problems.

APPENDIX G

Name _____

Social Security Number _____

Have you been interviewed personally by a counselor at El Centro College regarding your college courses?

Yes _____ No _____

Have you had an opportunity to review the Technical-Vocational Brochures on El Centro College Majors such as those displayed on the bulletin board in this room?

Yes _____ No _____

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