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COGNITIVE DISSONANCE AS AN INDICATOR OF UNDERGRADUATE TEACHER EDUCATION STUDENT ATTRITION

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COGNITIVE DISSONANCE AS AN INDICATOR OF UNDERGRADUATE

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CHAPTER I

INTRODUCTION

An undergraduate college degree is often perceived as an entry point into an occupational structure. Although there are other alternatives, the college program is viewed by many as being the optimum. The occupational goals of entering college or university students are many and varied. During the four years of undergraduate experience the occupational goals of the students are refined and in many cases altered or completely changed. Shifts and changes in occupational preference are of importance because they largely determine the number and quality of personnel entering a given profession.

At each point of shift or choice in career selection a decision must be made. Research done on undergraduate career choices (Davis, 1965) indicated that incoming freshman students have already begun the decision making process with regard to occupations. However, as they enter college, the decision has not yet been finalized. He noted the following changes during the college career as indications that decisions are still being made and that career choice is a fluid rather than a static situation.

1. Approximately half of the students change or choose a career during college.

2. Particular fields such as engineering, medicine and social science change considerably in popularity.

3. The occupations could be divided into three groups:

   a. Gainers--business and education. These fields are characterized by low loss, high gain and a net increase in the number of students.

   b. Losers--medicine, engineering, and physical sciences. These are characterized by high loss, low gain and a net decrease in the number of students.

   c. Traders--social sciences, biological sciences, law and humanities. These fields have both high losses and high recruitment rates and tend to remain stable in the number of students.

Theoretical Model

Information is generally accepted as being a necessary ingredient for rational decision making. In most decision situations the person already has possession of a number of bits of information or cognitions about the alternatives as he perceives them. New information necessary to make a given decision may be in conflict with the subject's cognitions. Festinger's theory of cognitive dissonance (1957) addresses itself to these conditions which are prevalent in decision making.

In terms of the decisions made relevant to a career choice a generalized model is presented in Figure 1. It should be noted that the decision to engage actively in a profession is not a single decision but rather the final one in a series of decisions. Three major decision points are indicated in the general model. These points are: the decision whether or not to enter college; the decision whether or not to

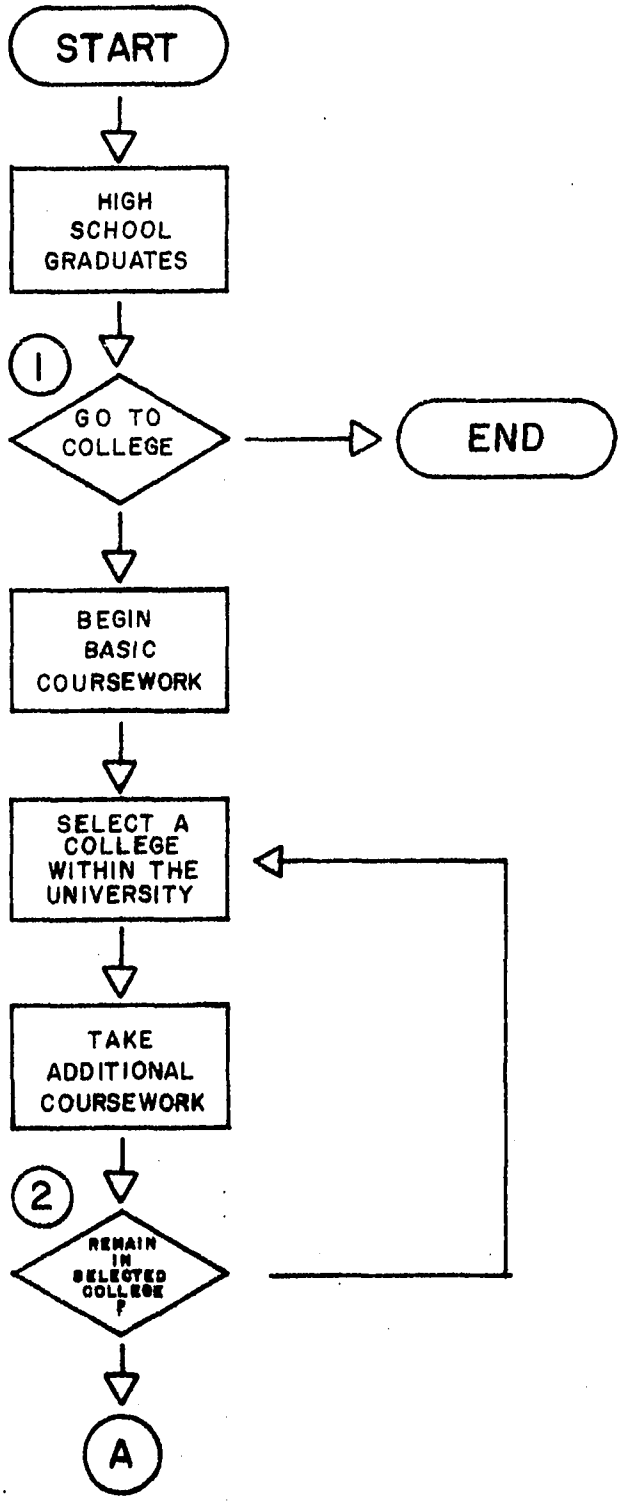

Fig. 1.--Generalized Career Choice Model

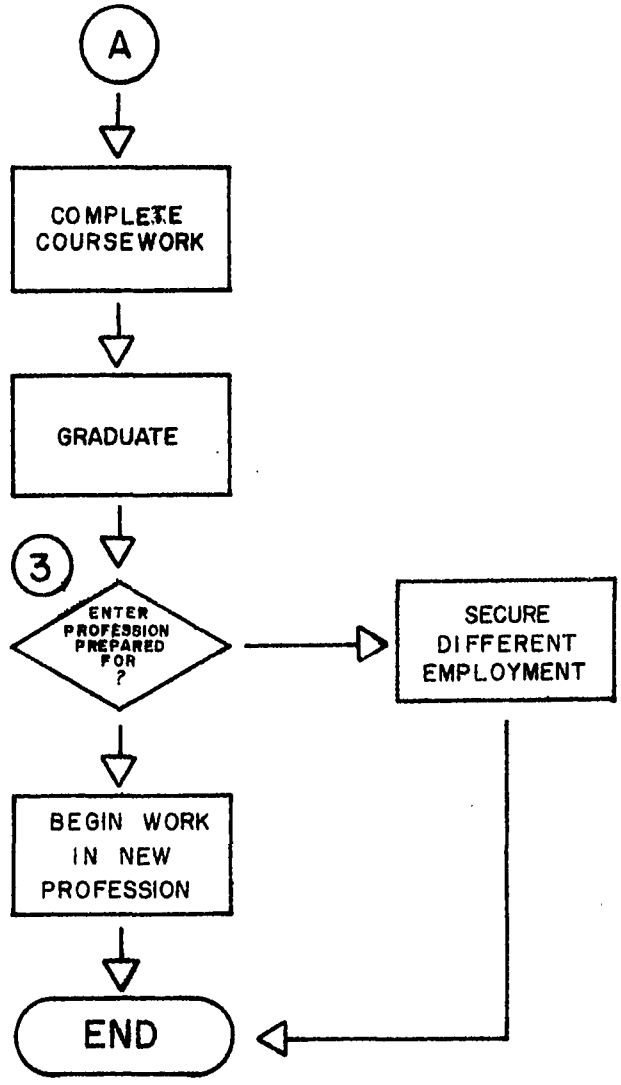

Fig. 1.--Continued

remain in a selected program; and finally the decision whether or not to enter the profession for which one has prepared.

Festinger found that when people were exposed to information or situations which were not in agreement with their own knowledge or their own view of the situation they encountered an unpleasant feeling which he termed cognitive dissonance. In such situations one likely response was for the person to ignore, deny, or reject the new information which was causing the dissonant feelings. Another common response was to remove himself from the region of the decision. The general model (Figure 1) indicates those points (1, 2, and 3) where the person's removal from the unpleasant situation is both a viable and frequently used alternative.

Festinger found that dissonance is one of the major consequences of having made a decision. In the case of making a decision between two exclusive, yet attractive alternatives, something must still be done to manage the unpleasantness of having rejected something which was not altogether unattractive.

The most usual types of decision, those between two alternatives, each having both positive and negative aspects, result in dissonance following the decision. The decisions made in career choice would fit this pattern.

It is necessary at this point to distinguish between Festinger's concept of dissonance and the concept of conflict. A person is in a conflict situation before making a decision. Once he has made a choice the conflict has been resolved. It is at this point that dissonance may occur.

An example in terms of career choice could exist as follows: A student is faced with the choice of a career in law or medicine. There exist cognitive elements both of a positive and a negative nature for each career. The two professions are generally held to be exclusive since the student cannot choose to prepare for both simultaneously. Therefore, a conflict exists. The choice of one of the alternatives eliminates the conflict. However, at this point dissonance occurs due to the presence of positive cognitions concerning the career which was not chosen.

In concluding their review of the research into cognitive dissonance Brehm and Cohen (1962) interpret the results as supportive of the theory and are convinced of the utility of the theory in the understanding of choice behavior. They found that although more research was needed, there have been few outright disconfirmations of the theory, either from experiments explicitly designed to test the theory or from relevant evidence from other theoretical sources.

The general career choice of undergraduate students has been presented as being comprised of a series of decisions at specific points throughout their college career (see Figure 1). Due to the serial nature of career decisions made by the undergraduate college student, several situations are present in which cognitive dissonance can be expected. Initial dissonance may be present in the basic decision concerning college entry. At each decision point the student is open to the addition of dissonance contributed by the new decision. Cognitive dissonance, present at the initial decision point, may therefore accumulate and become more intense with each new decision. It is this accumulation and

intensity of dissonance which contributes to a person's decision to withdraw from the situation at later decision points. Therefore, cognitive dissonance may be seen as cumulative and as becoming a major force at future decision points in the career selection process.

Career Choice in Teacher Education

In order to investigate the dynamics of career choice in a more specific setting, this study uses the theory of cognitive dissonance to identify one factor in a decision for or against a career in teaching. A successful demonstration would illuminate the problem of attrition of undergraduates in teacher education and provide positive information for program improvement.

There is a current concern both within the teaching profession and the general public over the apparent surplus of both elementary and secondary public school teachers. This situation is different than that of prior years. The primary concern was formerly one of the quality of the teachers graduated from colleges and universities. Today the question of quantity appears paramount. One may argue, as many have, about the viability of concern over quantity when compared with the unmet needs of today's public school which may hinder the achievement of high quality.

However, there is a second segment of students toward which attention should be directed. These are the substantial numbers who, although having completed a program in teacher education, never enter the teaching profession.

The University of Oklahoma Placement Office provided a statistical analysis for use in the 1972 College of Education report to the

National Council for the Accreditation of Teacher Education (NCATE). Their figures are for the following three school years: 1967-68, 1969-70, and 1970-71. These figures were taken from the follow-up on registrants at the Placement Office. There was a total of 1323 registrants for the years in question. This group was comprised of those graduating students who both qualified for a teaching certificate and were seeking a teaching position. Of the 1323 registrants a total of 665, or 50.3 percent, were actively engaged in a teaching career one year following their graduation and registration with the Placement Office. The record of the Placement Office data is presented in Appendix A.

These figures are comparable with the results found in A Prediction of Effectiveness in Secondary School Teaching (Bicknell, 1959). The study, conducted by the New York State Education Department, was begun in 1948 and concluded in 1954. It was undertaken primarily to determine whether or not the effectiveness of secondary teachers could be predicted from characteristics known prior to their college admission. Of interest to the current problem were the New York study's statistics on the attrition rate among teacher education students enrolling during the 1949-50 school term. Of a total of 1246 enrollees, only 531 were graduated and placed in teaching positions. Percentage results showed the following: 24.9 percent failed to graduate, 32.5 percent graduated but did not teach, and 42.6 percent entered the teaching profession. More recent research by Bayer, Royer, and Webb (1973) lends further support. Their study indicates that after four years, 37 percent of the freshmen who entered the nation's junior colleges, senior colleges, and universities in 1967 had not obtained at least an

associate degree. This is taken as another example of the attrition of college and university students.

It is obvious that the situation of qualified teacher education students failing to enter the profession is neither a new situation nor one which is unique to Oklahoma. Current emphasis on accountability coupled with the problem of the allocation of resources directs the attention of the educator back to this problem. The problem is heightened by the concern for the quality of the beginning teacher rather than the quantity of graduates. It is possible that many of the potentially quality teachers are the ones becoming disenchanted with the program and consequently not entering the profession.

One approach to the situation would be to conduct survey research aimed at locating and securing information from the graduates of the institution. This approach would be another case of institutional bookkeeping. It would be less than satisfactory on two points. From the practical point of view considerable difficulty would be encountered in conducting such a survey. Kerlinger (1973) reports that responses to mail questionnaires are generally poor. Returns of less than 40-50 percent are common. At best, the researcher must be content with returns as low as 50-60 percent. In terms of results, Good and Scates (1954) indicated that a high percentage of returns, above 95 percent, were necessary if results on survey research were to be considered accurate.

Through the use of certification records and school personnel files, it would be possible to trace the graduates who were teaching. The problems of locating those not employed by a school system would be more difficult. It would be possible to determine their non-teaching

status but virtually impossible to identify the current employment of many.

However, the greatest objection to the survey method is that it fails to address itself to the real question. The question which a survey cannot answer and which deserves investigation is: Why do so many graduates not teach? Or, in an alternate form, what are the determinants or dynamics in their decision?

Statement of the Problem

The choice of non-entry into the teaching profession was made and was shaped long before graduation. Therefore, our major concern should be in investigating the possibility of using a sound theoretical basis to develop and test a model which could be used to explore the various relationships and dynamics of the undergraduate program. This effort will remove the emphasis from a vital statistics or accounting model and would emphasize an interaction model.

The application of a theoretical approach represents a major shift in methodology. The question of where the graduates are ceases to be the vital one; the emphasis shifts to the question of why they did not enter teaching. The question is not solved in rhetoric about oversupply, economics and the like. Instead the key is to be found in the interaction of the attitudes of the incoming student and the program which is either offered to or thrust upon him.

Early identification of undergraduate student attitudes can be of considerable practical value to the College of Education. Their identification could have bearing in terms of practical management considerations

within the College as the College contemplates a non-certificate program. Attitudes regarding the program expressed by those who do not intend to follow a teaching career could be helpful in the determination of alternate courses, alternate sections of courses, alternate methods or objectives on the part of the professional staff of the College.

Dimensions of the Problem

This study will use Festinger's theory of cognitive dissonance to serve as a first point of entry into the investigation of the basic problem. The application of the theory of cognitive dissonance to the question of why many teacher education students never complete or never actively enter the profession would involve the following considerations.

There are some students enrolled in a teacher education program who have no intention of teaching. Following Festinger's theory one would expect that these people would experience a significant amount of dissonance that would influence their decision with regard to the course work required by the College of Education. Such feelings and their measurements could be of use to the College in both theoretical and practical areas. From the theoretical point of view these data could be used to explain partially the dynamic relations within the student population which differentiates those who intend to teach from those who do not intend to make teaching their career.

Cognitive dissonance was used as a form of measurement in an evaluation situation by Canter and Meisels (1971). Their usage revolved around the evaluation of a specific course. A group of college students were questioned concerning their expectations about the difficulty and

value of an introductory psychology course. According to the cognitive dissonance theory, a positive relationship would be expected between ratings of course difficulty and course value. The investigators found that cognitive dissonance appeared to be present as a factor in the subject's expectations. This suggests that the usage of the theory of cognitive dissonance could be expanded from the evaluation of a specific course to the study of an entire professional education sequence.

Hypotheses

The study will attempt, with the use of Festinger's theory of cognitive dissonance, to provide basic information of student's attitudes as they enter the professional preparation sequence of courses with regard to whether or not they intend to enter the teaching profession.

The following are hypothesized about the study:

Hypothesis 1.--The level of cognitive dissonance will be higher among those students who do not plan to teach upon their graduation.

Hypothesis 2.--The level of cognitive dissonance among those who do plan to teach will decrease in proportion to the number of years they anticipate being in the profession.

Hypothesis 3.--As the student with high dissonance progresses through the program his level of dissonance will increase.

Hypothesis 4.--Those who have low dissonance will perceive themselves as expending more effort in the first course than those who experience high dissonance.

Hypothesis 5.--Those students with low dissonance will have higher achievement than those with a high degree of dissonance. Achievement will be composed of two measures: the student's grade in Education 3422 and his grade point average (GPA) at the end of the semester in which he was enrolled in Education 3422.

Hypothesis 6.--Students in the College of Education will have a lesser degree of dissonance than students enrolled in other degree granting colleges.

Hypothesis 7.--Students enrolled in elementary education, special education, and early childhood education programs will experience less dissonance than students in other certificate programs.

CHAPTER II

REVIEW OF THE RELATED LITERATURE

The purpose of this chapter is to present a review of research which has been done relevant to the problem of this study. The review has been divided into three major sections. Section one deals with literature of a general nature relating to vocational choice. The second section deals with the dynamics involved in more specific choices. Emphasis will be placed on the decision for a career in education. The final section deals with the theory of cognitive dissonance and its implication for the decision making process.

General Vocational Choice

The problem of this study focused on the subjects at a particular point of time. All subjects were, to some degree, engaged in the process of vocational choice. Therefore, it was necessary to examine briefly the current theories of vocational choice. It must be remembered that current theories "are theory fragments which attempt to integrate and systematize a portion of human behavior with respect to a specific human problem" (Osipow, 1968, p. viii).

Key (1970) presented a categorical summary of the general views held by theorists regarding occupational choice. The theories are classified as being trait-factor, personality, developmental or sociological in orientation.

The trait-factor theorists stressed occupational choice as being a one-time matching of the characteristics of the individual with occupational opportunities. This approach is representative of work done in the early part of the century by Parsons (1909) and Kitson (1915).

Personality theorists represented by Roe (1957) and Holland (1959) proposed that jobs were selected in order to fulfill the personality needs of the worker. This action makes occupational choice more an unconscious process dictated by personality.

Ginzberg (1951) and Super (1953) are considered supporters of the developmental theory of occupational choice. As an individual ages he develops a sharper self-concept which is compared to his image of various occupations. A "good" career choice is dependent on the similarity between the image the person holds of himself and his concept of the chosen career. In the process the individual's self-concept and his image of the occupation are often compromised.

Sociological theories as presented by Blau (1956) and by Miller and Form (1964) follow a different approach. Coping techniques are the key factors in these theories. The career choice of the individual is viewed as being outside his sphere of influence. Social and environmental factors determine the career choice. The final career choice in this system is the result of the individual developing techniques adequate to deal with the environment.

The necessity of making a decision is present in each theory of vocational choice. As expressed by Tiedeman (1961, p. 15), "The compromise inherent in discovering and nourishing the area of congruence of person and society as expressed in an individual's vocational behavior

is effected within a set of decisions." Decisions to enter a profession are viewed as having two distinct periods. These are the period of anticipation (decision is made) and the period of implementation and adjustment (decision acted upon).

The various theoretical views of vocational or occupational choice are relatively similar. Osipow (1968, p. 233) sees them as similar in that "they emphasize the same kinds of critical agents and periods in career development." Differences are seen as occurring between their choice of emphasis and the research methods suitable to each.

Career Choice at the College Level

The subjects of this study were involved in the process of vocational decision making. Their presence in the Education Professions Division is seen as indication of that involvement. The literature of this section is directed to career choices made at the college level with particular emphasis given to those involving careers in education.

Emphasis on career education would make it appear that career choices are being made at an earlier age. Hollender (1971) conducted research with adolescents, grades six through twelve. Results showed that 69 percent of the females and 59 percent of the males had already made a definite career choice. However, the research done at the college level indicates that there is still a large degree of indecision present. As previously reported, Davis (1965) indicated that approximately half of the college students either change or choose a career during college.

The college experience is one of change and reassessment of career choice. Results obtained by Hilton (1962b) indicated that

subjects were quite indifferent about occupational plans, even at the end of the academic year. Subjects used in the study were divided into three equal groups of ten (N = 30). The groups were: (1) male engineering students, (2) male graduate students in industrial administration, and (3) female undergraduate students. In terms of their career choice, twelve of the subjects expressed some reservations about their choice while three had not yet made a decision. Regardless of the reservations twenty-four regarded their decisions as relatively permanent.

Career shift is a common occurrance among college students. Holland and Whitney (1968) suggested that students remain in the same major occupational class even though they may change preferences within that class. In their descriptive study of the freshman class of 1965, Astin and Panos (1967) found changes in career choices as being a factor for students leaving college. Change in career choice was listed as a major factor for withdrawing from college by 22.1 percent of the males and 20.7 percent of the females and as a minor factor for 15.4 percent of the males and 13.6 percent of the females. These subjects had evidently made career choices for which continuance in college appeared unnecessary.

The effects of university experience on occupational choice of undergraduates were investigated by Hind and Wirth (1969). Their research was based on the assumption that students move away from occupations demanding more extensive academic training. Subjects were male students in a highly selective university. Only one-fifth of the applicants for the class were accepted with the middle one-third achieving a score at the 97th percentile on the College Entrance Board Scholastic Aptitude

Test (SAT). Occupational choices were categorized as being academic, traditional professional, education, government, business, engineering and other. Findings indicated little change during the four years of college attendance in terms of persons entering the various fields. For example, as freshmen, 7 percent indicated the intent to enter the field of education. Six months after graduation 8 percent had actually entered the field. Gross figures for the occupational fields indicate that they remained rather stable over the four-year period. This was not true of the individual college student. During their college experience 63 percent of the sample made at least one shift in career choice.

In a study of the change of the major field of study Holland and Nichols (1972) determined that students will remain in a field of study if they resemble the typical students already in that field in terms of aptitudes, achievement and personality. The change in major field was seen as a function of a rather large number of both personal variables and achievements. Holland and Abe (1965) also indicated that although college students make changes they know where they belong; they know what field coincides with their interests.

Doyle (1965) conducted a follow-up of male college graduates who had entered a career. Seventy percent were found to be involved in some aspect with their initial occupational field. An additional 25 percent had one or more exploratory jobs before establishing themselves in a profession, while the remaining 5 percent never did settle down in a field. Although there were many changes in occupational

choice while the subjects were in college, after graduation the majority did remain with their final career choice.

There is an abundance of research, much of it inconclusive, dealing with the field of education and teachers in particular. The review which follows is restricted to the decision to enter an education profession. Persons entering the profession do so after being involved in the decision making process during their college experience as previously detailed.

Warner (1970) explored the attitudes of prospective teachers toward teaching. The sample in the study was composed of 200 students at UCLA of whom 190 were female. Thirty-seven percent had chosen teaching as a career based on their perception of teaching as a good profession which offered security. Another 15 percent expressed enjoyment derived working with children as being a factor in choosing a teaching career. The largest group, 59 percent, had relatives in the profession who provided encouragement. Another factor discovered was that the students choosing education careers had done well and had enjoyed school as children. In concluding, Warner (1970, p. 250) indicated that students "are encouraged to enter the profession because of: (1) teachers they had, (2) satisfaction with their own education, and (3) the nature of the profession."

Bentley and Rossmann (1969) explored the question of students choosing to pursue a career in college level teaching. Subjects reported that being involved in practical classroom related activities in their program had a significant impact on their decision. Serving as a laboratory assistant or tutoring other students were activities mentioned.

This involvement tended to reinforce the decision and build needed confidence.

There also appears to be a sex-linked variable involved with the choice to enter the teaching profession. Fuchel (1966) conducted a survey using the interview technique to determine factors which influenced persistence in a teaching career. One of the conclusions reached was that most women had entered the teaching profession by default. Their career was viewed as being secondary in nature to other goals. Therefore, they were not persistent in following the career.

Haubrich (1960) reported on research done at the University of Utah. Using 195 education students, research was conducted in the motives of the prospective teachers. Only one-third declared a life goal of teaching. Thirty percent indicated that they viewed a teaching career as a mattress. It afforded a secure job which one could fall back upon if needed. Eighteen percent listed marriage as their first college goal and rated the teaching career as a secondary goal.

Of final interest was research reported by Richey (1968). Results of a survey conducted by the National Education Association (1965-1966) dealt with the teacher's willingness to teach again. If given the chance to begin their career again 22 percent indicated that the chances for entering the teaching profession would be about even or less.

Many of the reports and studies cited have given their results in percentage form. This is seen as indication that the results are from survey type research and are not representative of a very high level of statistical sophistication.

Cognitive Dissonance and Choice

The factor of cognitive dissonance as theorized by Festinger has the potential to be an integral part of the dynamics of vocational choice. As defined by Lawrence and Festinger (1962, p. 33)

> The theory of cognitive dissonance deals, in part, with the psychological states that arrive in humans as a result of taking some action and then finding that the consequences of this act are not sufficient to justify the action taken. Such conditions set up a motivational state called dissonance. The basis for this dissonance is the opposition between two cognitions or two sets of information.

Research done by Snider (1967) indicated effects which supported dissonance theory's assumption of the necessity of choice for the production of dissonance. Festinger proposed that the most common way to reduce dissonance is to alter or change the behavior.

Dissonance has been presented as being a part of the decision making process. Likewise, the concept of vocational choice is viewed as being by definition involved with decision making. In such a framework the occurrence of dissonance coupled with a vocational decision is neither a surprising nor an unnatural situation.

According to Katz (1970) vocational decisions imply an understanding of self. Also of importance is the recognition that the choice must be made between competing alternatives. Gelatt (1962) described good decisions as those in which the decision maker considers alternatives and probabilities and is willing to accept the responsibilities for the consequences. Career choice is viewed as a process rather than as an event. As reported by Hsu (1970), in order for a person to reach his vocational aspirations, the individual makes vocational decisions

in such a manner as to minimize the discrepancy between the value of his vocational choice and that of his vocational aspirations.

Research by Hilton (1962a) seems to establish the position of cognitive dissonance in career decision making. In his model, input from the environment indicates that the person should decide upon a career. If the career decision is above the subject's tolerance level for dissonance he must re-examine his premises. When the premises cannot be revised an alternate behavior must be found. An alternative is selected and tested for dissonance. If the dissonance is sufficiently lowered the decision is made to accept the tentative plan and premises are adjusted accordingly. Since career development is a chain of decisions the creation and reduction of dissonance often will be present. Hilton (p. 298) " . . . proposes that the reduction of dissonance among a person's beliefs about himself and his environment is the major motivation of career decision making."

Dissonance resulting from a decision has been termed post-decision dissonance. Research by Brehm (1956) supported both the existence of dissonance following a decision and the presence of efforts to reduce the dissonance. His research was followed by that of Rosen (1961) which indicated that once a decision has been made the subject tends to seek out information which is consonant with the decision thereby reducing the post-decision dissonance.

Gerard (1967) found that the more equal the alternatives involved in a decision the higher the level of dissonance. Career choices made by college students are often of that type. The advantages of two or more different career choices are often very near equal. Reduction of

the level of dissonance was determined as being accomplished by the subject: (1) spreading apart the value of the alternatives, (2) paying less attention to the non-chosen alternative, and (3) developing a memory deficit of the positive factors of the non-chosen.

Once a vocational choice or most other decisions have been made the individual must take steps to reduce dissonance. One approach to dissonance reduction is presented by Morris (1972, p. 195):

> We may seek coherence by becoming more optimistic about a course of action after we have chosen it than before. Sometimes we adopt the belief that what we have become committed to is the best possible course of action, although we had no such conviction prior to our commitment. We achieve coherence or reduce cognitive dissonance by revising our perceptions.

The other alternative to reduce dissonance is to change the course of action or the decision. Selvin (1972) reported that in terms of career plans most discrepancies between values and career choices were resolved by changing the career plans.

Summary

The problem of career or vocational choice has been presented as being a problem characterized by a sequence of decisions. These decisions are far from complete when the student enters college. Rather it is during the college years that the majority of students either refine or make initial career choices.

Cognitive dissonance theory is seen as being applicable to the situation. Students are faced with career alternatives which are often equally appealing. Having made a decision, post-decision dissonance is present.

In narrowing the research the following problem is seen as emerging. Students in the study have made the initial career decision to pursue teaching as a profession. This decision is represented by the student's request for admission to the Education Professions Division. Completion of the requirements of the Division will lead to certification and possible employment as a teacher.

However, there are substantial numbers (30 out of 105) of the sample who have already indicated they are not going to enter the teaching profession. These students have made a decision and are faced with the situation of encountering consequences (Education 3422) which are not sufficient to justify the action taken. It is therefore reasonable to expect this group to experience a high degree of post-decision dissonance.

The choice of the teacher preparation program assumes the presence of positive expectations or at least expectations which are less negative than some other alternatives. Therefore, the measure used as an indication of dissonance is the subjects' rating of the first required course. This represents the first real chance for the student to re-evaluate his choice and to reduce any degree of dissonance present either by changing the perceptions of the situation or by reversing the decision and choosing an alternate career.

CHAPTER III

METHODOLOGY

The establishment of the presence of cognitive dissonance in a post-decision situation was the specific focus of this study. The value of this concept was seen in its use as a point of entry into the more general problem of the dynamics of career selection and attrition rate among undergraduate students. Attention was directed to education students to show how the concept of cognitive dissonance could be used in the investigation of the problem.

Sample

The subjects for this study were students in the College of Education at The University of Oklahoma. All were enrolled in the first course in the undergraduate professional sequence, Education 3422--Psychology in Education, when the baseline data for the study were collected (fall 1972). Three sections of undergraduate students enrolled in the course responded to the questionnaire.

Education 3422 was chosen as the course in which to collect data because of its position in the College of Education's sequence of study. It is the first required course for all students seeking a teaching certificate and who have been admitted to the Education Professions Division. Prerequisites for Education 3422 are Psychology 1113--Elements of Psychology and Sociology 1113--Introduction to Sociology, as well as

Education 2424--School in the American Culture. In addition, the student must maintain the cumulative grade point average as prescribed by the College of Education. The final requirement for enrollment in Education 3422 is the student's admission to the Education Professions Division based on both the fulfillment of prerequisites as described above and the request for admission on the part of the student. Since the study was concerned with the general career decision model of undergraduate students, the graduate students were eliminated from the group. Graduate students were viewed as having made a later decision to return and complete credentials for the teaching profession. Their elimination reduced the group for the study to 105.

Progression through the teacher preparation program is similar to the general career choice model previously presented in Chapter I. The teacher education program is also characterized by several decision points at which dissonance may begin or increase. The adaptation of the general model to the teacher education program is shown in Figure 2. Decision points are indicated on the figure at points 1, 2, 3, 4, and 5. These involve three major decisions which must be faced by the student. They are: the decision to enter the program; the decision to remain in the program (made several times); and the decision to enter the teaching profession upon graduation. The first of these decision points was the focus of the study.

Immediately following the student's decision to enter the teacher preparation program (decision point 1) he begins the basic coursework. It is at that point that Education 3422 is taken as the first course in the professional sequence. Therefore, data collected in Education 3422

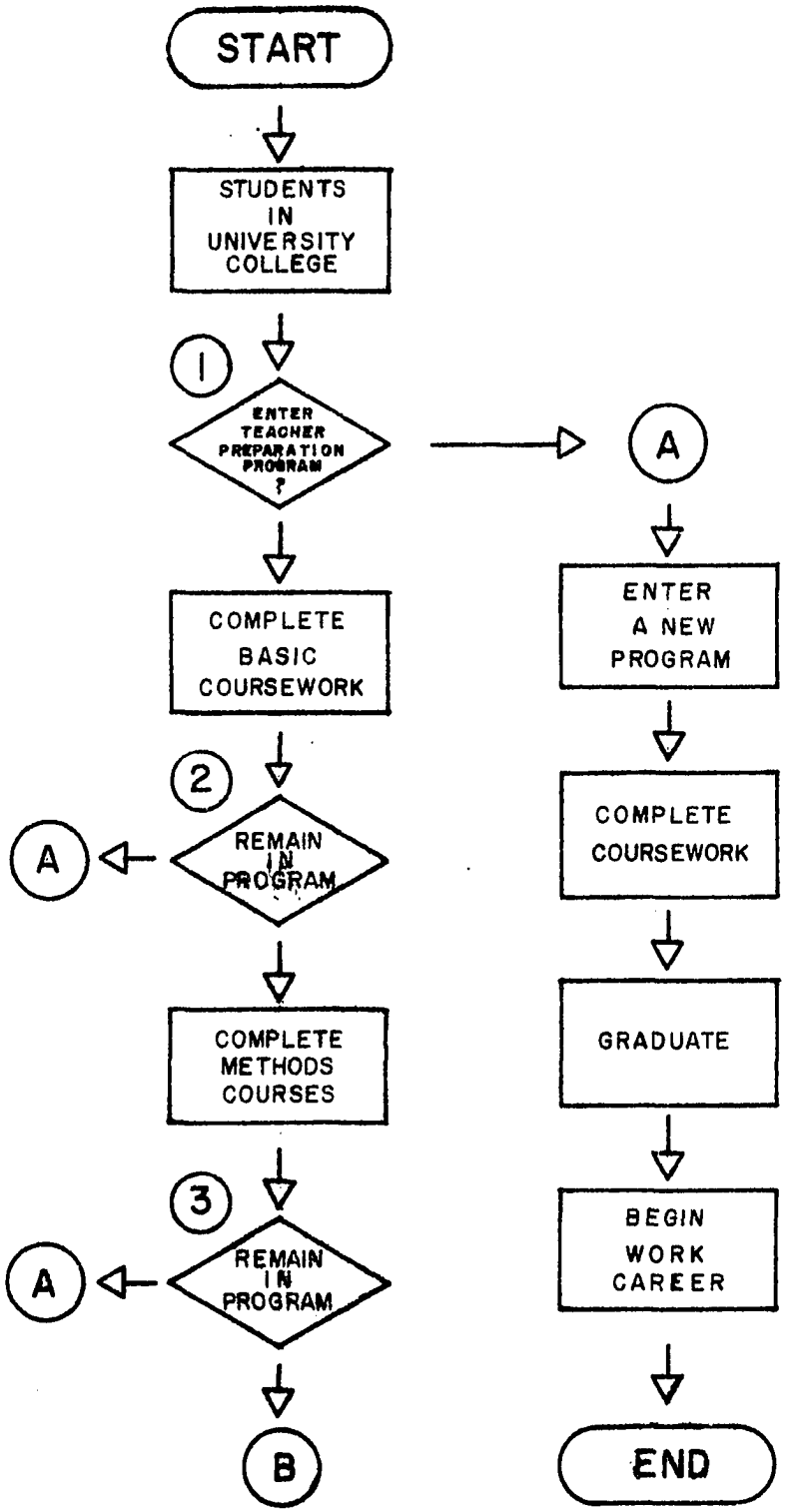

Fig. 2.--Teacher Education Career Choice Model

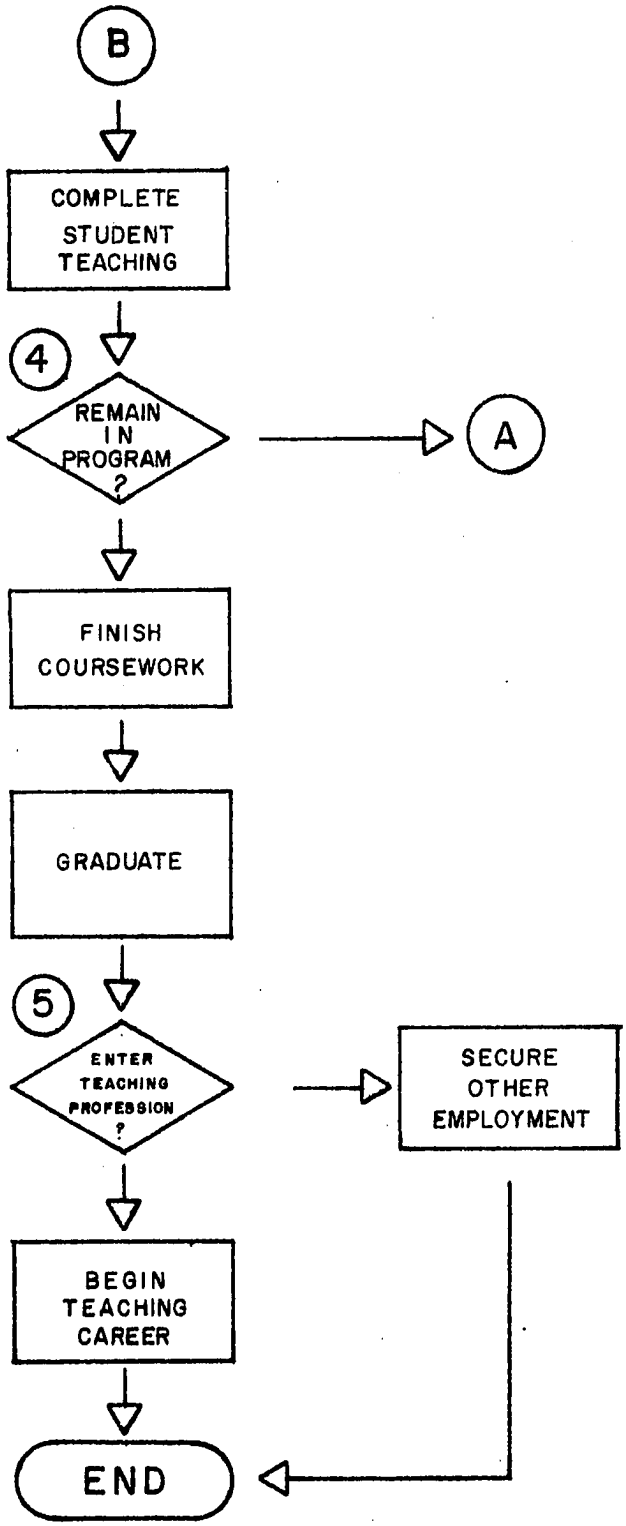

Fig. 2.--Continued

provided information relative to the student's attitudes regarding the teacher education program upon his entry into it.

In summary, the sample is representative of students who had met the requirements for entry into the College of Education. They had also made the choice to pursue a program in teacher education leading to certification. Finally, they were all enrolled in the first course in the professional sequence, Education 3422.

Instrumentation

Data for each subject were collected from two separate sources. The major portion of the data was comprised of the subject's responses on the Professional Planning Questionnaire (PPQ) which is presented in Appendix B.

The PPQ as developed was comprised of three distinct sections. The first section (items 1-15) was used to gather data of a basic demographic nature. Section two (items 16-18) was directed at the vocational goals of the subjects as they viewed these goals upon their graduation, five years after graduation and ten years after graduation. The final section of the instrument (items 19-26) related to the subject's experiences with coursework within The University of Oklahoma in general and specifically within the College of Education.

Once developed, the PPQ was used in a pilot study with a class enrolled in Education 3443--Psychology of Childhood. As a result of this study, several items were revised in order to remove ambiguities. The pilot study also afforded an opportunity to determine the length of time needed for administration of the PPQ as well as developing procedures for the actual data collection and processing.

The second data source was student records. It was from these records that the two achievement variables used in later analyses were obtained. The two measures used were the student's grade in Education 3422 and his current grade point average.

Basic Grouping of the Subjects

In order to apply Festinger's theory of cognitive dissonance, subjects were divided into two groups. The basis for grouping was the subject's vocational plan immediately following graduation. Those who intended to enter a teaching profession were placed in one group and those who at this early point in their professional training had already decided not to pursue a teaching career were placed in the other. The results of the groupings are shown in Table 1.

TABLE 1

GROUPS DETERMINED BY VOCATIONAL PLANS

Vocational Plans	Teaching Groups N = 75	Non-Teaching Groups N = 30
Elementary Teacher	15	0
Secondary Teacher	32	0
School Administrator	1	0
School Specialist	27	0
Housewife	0	2
Military Service	0	1
Business	0	7
Industry	0	0
Other	0	20

Procedure

For discussion of the procedures used each hypothesis is presented separately. The presentation includes the hypothesis in the null form, description of data used, groupings of subjects, statistical tests used and any other considerations unique to the hypothesis.

Hypothesis 1.--The first hypothesis dealt with the measurement and establishment of the measure of cognitive dissonance. This measure formed the criterion measure for use in the testing of additional hypotheses.

The two groups, those who planned to teach and those who planned not to teach, were used in the testing of the first hypothesis. The hypothesis in null form stated that there would be no difference in cognitive dissonance between those students who planned to teach upon their graduation and those who did not.

Dissonance was measured using the student's response, on a nine point scale, to the question of the future usefulness of the content of Education 3422. Having made the decision to enter the teacher education program, the students' evaluation of course usefulness was seen as reflective of the degree to which their expectations about course usefulness had been met. Low ratings were seen as indicating unmet expectations and the presence of post-decision dissonance.

The analysis of differences between the teaching and non-teaching groups was conducted by means of an independent measures t test.

Hypothesis 2.--Relative strength of dissonance was explored in Hypothesis 2. The exploration involved only those students who had

indicated that they were going to teach upon graduation (N = 75). These subjects comprised the low dissonance group as determined in Hypothesis 1. The subjects were grouped according to the largest number of years they had anticipated being in the teaching profession. For example, a subject who indicated both immediate teaching plans and the intention to be teaching five years following graduation was placed in the five-year group. Those who indicated an exit and reentry into the teaching field (N = 3) were not considered in this particular analysis since it could be questioned if they were truly committed to the profession. Their exclusion reduced the number of subjects to seventy-two. Three groups were used in the analysis for this hypothesis: those planning to teach only a short time immediately following graduation (N = 21); those planning to continue teaching five years after graduation (N = 14); and those planning to continue teaching ten years after graduation (N = 37).

The hypothesis stated that there would be no difference in the level of dissonance among those who intend to teach relative to the number of years they anticipated being in the profession. Student's ratings of Education 3422 were again used as the measure of cognitive dissonance. The hypothesis was tested by using a one way analysis of variance with three levels.

Hypothesis 3.--The third hypothesis was directed at subjects in the group determined to be more dissonant in Hypothesis 1 (those not planning to teach). There were thirty (30) subjects in the group.

The hypothesis in null form stated that as the student with a higher level of dissonance progressed through the program there would

be no change in the student's level of dissonance. Ratings given on two courses, Education 2424 and Education 3422, were used to test the hypothesis. These ratings represent the students' perceived usefulness of the earlier course, Education 2424, compared with those of the first course taken following the decision to enter the teacher education program, Education 3422. Since the two measures were made on the same subjects a dependent measures t test was used to test the hypothesis.

Hypothesis 4.--The amount of effort expended for a given task is often viewed as being an indication of the amount of value or worth associated with the task. A person will, for example, devote much time and energy working for a cause of high social value such as a charitable organization.

The effort-value concept is basic to the theory of cognitive dissonance as exhibited in this hypothesis. The sample was divided into the high and low dissonance groups established in Hypothesis 1. The hypothesis predicted no difference between the high and low dissonance groups of the mean amount of effort each group perceived itself as expending in Education 3422.

The measurement used was an evaluation of the amount of effort the subjects reported expending in the course, recorded on a nine-point scale. The hypothesis was tested using an independent measures t test between the two groups.

Hypothesis 5.--The achievement level of the subjects was the item of concern for this hypothesis. Achievement is seen as reflective of either effort or interest in a given task. In this instance, the

concern was with the achievement level and the level of dissonance. Specifically, the hypothesis stated that there would be no difference in achievement between the high and low dissonance groups.

Two achievement scores for each subject were used. The first of these scores used was the grade each subject achieved in Education 3422. The subject's grade point average (GPA) at the completion of the semester in which the study was conducted (Fall, 1972) comprised the second score.

Two independent t tests could have been used to compare each of the achievement variables across the two groups (high and low dissonance). However, this would not account for any interaction or correlation present between the two achievement measures. In order to account for this the Hotelling T^2 statistic was used for the analysis. This statistic is the multivariate generalization of the univariate t test. In general, if there are several variables to consider, the T^2 statistic can be used for an overall multivariate test which is comparable to a univariate t test which might be done for each variable separately (Overall and Klett, 1972).

Hypothesis 6.--Not all subjects in the study were enrolled in the College of Education. Some were enrolled in other colleges such as the College of Arts and Sciences. However, all subjects were enrolled in a teacher certification program in the College of Education. The hypothesis was concerned with college differences. It stated that there would be no difference in the level of dissonance between students enrolled in different colleges. As before, the level of dissonance was

the rating given Education 3422. The grouping of subjects by colleges is shown in Table 2.

TABLE 2

DISTRIBUTION OF SUBJECTS BY COLLEGE ENROLLMENT

College	Number of Subjects N = 105
Arts and Sciences	34
Business Administration	1
Education	66
Engineering	0
Fine Arts	2
Graduate	0
University College	2

Original plans for the analysis called for the use of an analysis of variance with a level for each college (seven levels) to determine if there were differences between colleges. However, the data would not support such an analysis due to the small number of subjects at some levels. The data were therefore analyzed to determine if there were differences between the two largest groups, Education (N = 66) and Arts and Sciences (N = 34). An independent measures t test was used as the test statistic.

Hypothesis 7.--There are many different certification programs open to students within the teacher education curriculum. Hypothesis 7 dealt with differences between these programs and stated that there would be no difference in the level of dissonance between the different certificate programs. The rating given Education 3422 was again used as the measure of dissonance.

Due to the large number of certificate programs, they were combined into certificate groups for data collection. The groups were made up of the most common undergraduate certificate programs. Subjects indicated that they were pursuing a certificate program in one of the certificate groups rather than indicating a specific certificate. The certificate groupings used in the study are shown in Table 3.

TABLE 3

CERTIFICATE GROUPS

Certificate Group	Group Includes
Communications	Public School Librarian Foreign Language Journalism Language Arts Speech and Drama
Fine Arts	Vocal Music Instrumental Music Combined Music Art
Math-Science	Mathematics Biological Sciences Earth Sciences Physical Sciences
Business and Vocational	Business Education Bookkeeping and Clerical Practice Vocational Business and Office Education
Social Studies	Social Studies
Special Education	Special Education
Elementary Education	Elementary Education
Health and Physical Education	Health and Physical Education
Early Childhood Education	Early Childhood Education

The analysis of the hypothesis was to have been conducted with the use of an analysis of variance among the certificate groups. As shown in Table 4 the number of data in some groups would not support the inclusion of all groups.

TABLE 4

RESPONSES ON GENERAL CERTIFICATE PROGRAM

General Certificate Program	Number of Subjects N = 105
No certificate	8
Communications	16
Fine Arts	3
Math-Science	11
Business and Vocational Education	7
Social Studies	12
Special Education	23
Elementary Education	17
Health and Physical Education	5
Early Childhood Education	3

The certificate areas were regrouped on the basis of the data in Table 4. Those in no certificate program (N = 8) were excluded, lowering the sample size to 97. Those in Special Education, Elementary Education, and Early Childhood Education were grouped together (N = 43). The other programs, being directed more toward subject or discipline areas, were viewed as being basically oriented to subjects preparing to teach on the secondary level. These remaining certificate programs were grouped together (N = 54) and an independent measures t test was conducted between the two groups representing elementary and secondary certificate programs.

Demographic Data.--Several items of a demographic nature were also analyzed. Those items were sex, age, class, type of housing area, and current marital status. Using the previously defined groups of high and low dissonance the demographic variables were grouped by dissonance and by demographic grouping. The results of the groupings were then analyzed through the use of a series of Chi-square tests.

CHAPTER IV

RESULTS AND DISCUSSION

Establishment and Measurement of Dissonance

The issue in Hypothesis 1 was the establishment of the presence of dissonance. The ratings given on the usefulness of Education 3422 were used to indicate the degree of dissonance present after the decision to enter the Education Professions Division was made. Means and standard deviations were calculated on the ratings given by the group which planned to teach and on the group which planned not to teach. It was hypothesized that there would be no difference in the ratings given by the two groups. An independent measures t test was performed on the means of the two groups as a test of Hypothesis 1. The results are shown in Table 5.

TABLE 5

t TEST TO ESTABLISH HIGH AND LOW DISSONANCE GROUPS

Group	Mean	S.D.	t*
Those planning to teach (N = 75)	4.37	2.17	3.05**
Those planning not to teach (N = 30)	2.93	2.21	

*df = 103
**p < .01

The results, significant at the .01 level, allowed for the rejection of the hypothesis. Neither group gave the course a high rating on the nine-point scale. This indicates that both groups were experiencing some dissonance in that the course did not appear to fulfill their expectations of usefulness. However, the mean difference showed that those who indicated an intent to teach were more pleased and less dissonant than the group which did not plan to teach.

In discussion of additional hypotheses the group planning to teach and the group planning not to teach will be referred to as the low and high dissonance groups respectively. This form will be followed in both textual and tabular material.

Degree of Dissonance and Anticipated Length of Service

The study of the relationship of dissonance and the anticipated length of service in the teaching profession was restricted to the group which had indicated plans to teach upon graduation. Using the ratings given Education 3422, means and standard deviations were calculated for the groups based on the length of their anticipated service. The results are presented in Table 6.

TABLE 6

MEANS AND STANDARD DEVIATIONS OF COURSE USEFULNESS BY GROUPS ANTICIPATING DIFFERENT LENGTHS OF TEACHING SERVICE

Group	N (102)*	Mean	S.D.
Teaching upon graduation	21	3.81	1.83
Teaching 5 years after graduation	14	5.50	1.74
Teaching 10 years after graduation	37	4.38	2.43

*Three subjects omitted due to plans to exit and reenter the profession.

Those planning to continue teaching five years after graduation rated the course higher than the other two groups. The group planning to continue in the profession ten years after graduation had the largest standard deviation of the groups. In order to compare the three groups a one-way analysis of variance with three levels was conducted. Table 7 presents the results of the analysis.

TABLE 7

ANALYSIS OF VARIANCE OF COURSE USEFULNESS AMONG GROUPS ANTICIPATING DIFFERENT LENGTHS OF TEACHING SERVICE

Source	SS	df	MS	F
Total	341.6528	71		
Between groups	24.2119	2	12.1059	2.63
Within groups	317.4409	69	4.6055	

The value obtained for F did not reach the level needed to reach significance ($p < .05 = 3.14$). The hypothesis of no difference in dissonance relative to length of anticipated service could not be rejected. Although the teaching group rated the course higher than the non-teaching group there was not a significant difference when those in the teaching group were grouped by length of service. How long they planned to teach did not appear to be a major factor influencing the degree of dissonance.

Dissonance Increase in the Non-Teaching Group

The portion of the sample which did not plan to enter the teaching profession was determined to be more dissonant than the teaching

group (N = 30). Interest in this group was directed to the question of whether or not their dissonance had increased as they progressed through the program. It was hypothesized that no differences would exist between the ratings given Education 2424 and those given Education 3422. Results of the dependent measures t test used to test the hypothesis are given in Table 8.

TABLE 8

t TEST TO ESTABLISH INCREASE IN DISSONANCE IN THE HIGH DISSONANCE GROUP

Course	Mean	S.D.	t*
Education 2424	4.17	2.72	2.84**
Education 3422	2.93	2.21	

*df = 29
**p < .01

The results of the test indicated that the hypothesis of no change in dissonance level should be rejected. As shown by the mean difference of 1.24 points on the nine-point scale, the subjects' evaluation of the courses became significantly lower as they progressed further into the program. This is seen as an indicator of an increase in the level of dissonance present.

Dissonance Degree and Perceived Effort

The two groups reported the amount of effort they had expended for Education 3422. Means and standard deviations were calculated for each group. The data were then subjected to an independent measures t

test in order to test the hypothesis of no difference between the effort of the two groups. Table 9 summarizes the results.

TABLE 9

t TEST BETWEEN AMOUNT OF EFFORT EXPENDED BY DISSONANCE GROUPS

Group	Mean	S.D.	t*
Low Dissonance (N = 75)	4.92	2.17	2.19**
High Dissonance (N = 30)	3.90	2.11	

*df = 103
**p < .05

The obtained t value allowed for the rejection of the hypothesis. There is an apparent difference between the high and low dissonance groups. This difference is reflected in the means of the two groups (difference of 1.02). The less dissonant group, seeing more value in the course, reported expending significantly more effort. Those with the higher level of dissonance may have reacted by not putting forth much effort for a course they viewed as having little practical value.

Dissonance and Achievement Variables

Two achievement measures (grade received in Education 3422 and current GPA) on each subject were used to test the hypothesis of no difference between the high and low dissonance groups in terms of their achievement. In this multivariate situation the Hotelling T^2 was used to test the hypothesis. Once the value for T^2 was calculated it was converted to an F value. Results of the test are shown in Table 10.

TABLE 10

HOTELLING T^2: RELATIONSHIP OF DISSONANCE GROUPS WITH ACHIEVEMENT VARIABLES OF GRADE RECEIVED IN EDUCATION 3422 AND GPA

Group	Grade Received Mean	S.D.	GPA Mean	S.D.	T^2	F*
Low Dissonance (N = 75)	3.01	.79	2.96	.53	11.37	5.63**
High Dissonance (N = 30)	2.83	.87	2.69	.43		
r GPA and Achievement = .3994						

*df = 2, 102
**p < .01

The results indicate the rejection of the hypothesis. There was a difference between the two groups in terms of the two achievement variables. The mean scores alone were some indication of the difference. Those in the low dissonance group had higher mean scores in both achievement variables than did the high dissonance group (differences of .180 in grade achieved and .261 in GPA). These findings are seen as complementary to those found in Hypotheses 1 and 4. The low dissonance subjects as determined by Hypothesis 1 report expending more effort as shown in Hypothesis 4. The results of a greater amount of effort reported expended can be seen on higher and significantly different scores on achievement variables.

College Differences in Dissonance

Differences in the dissonance level in different colleges within the university was the focus of Hypothesis 6. Students representing the

two major college groups within the sample were compared by means of an independent measures t test. The two groups, which accounted for 100 of the total 105 subjects, were enrolled in either the College of Education or the College of Arts and Sciences. Table 11 presents the results.

TABLE 11

t TEST BETWEEN DISSONANCE OF SUBJECTS ENROLLED IN TWO COLLEGES

Group	Mean	S.D.	t*
College of Education (N = 66)	4.06	2.38	.25
College of Arts and Sciences (N = 34)	3.94	2.09	

*df = 98

The obtained t value was not large enough for rejection of the hypothesis. Differences in dissonance between colleges could not be established. As indicated by the means (4.06 and 3.94) the two groups were very nearly equivalent. It should be noted that all subjects (high and low dissonance groups) were used in this analysis since the interest was in dissonance between colleges and not dissonance between groups with differing vocational plans.

Certificate Areas and Differences in Dissonance

All subjects were used to test the hypothesis that there existed no difference in dissonance between areas of certification. Two certificate groups, elementary and secondary, were used to test the hypothesis.

The results of the independent measures t test are as follows, shown in Table 12.

TABLE 12

t TEST BETWEEN DISSONANCE LEVEL OF SUBJECTS IN TWO CERTIFICATE PROGRAMS

Group*	Mean	S.D.	t
Elementary (N = 43)	4.26	2.58	1.21**
Secondary (N = 54)	3.70	1.92	

*Eight subjects did not indicate a certificate program.
**$t_{(.05, 95)} = 1.66$

Results would not support the rejection of the hypothesis. The mean ratings of the two groups indicate that there was not a significant difference in dissonance level between the elementary and secondary level certificate programs. The elementary level did rate the course higher and could be considered the less dissonant of the two groups. However, this difference (.56) was not statistically significant. Therefore, the conclusion is reached that the degree of dissonance does not vary as a function of the level of certificate program.

Demographic Variables

An analysis of demographic variables was also conducted. This was in addition to the analysis of the major hypotheses of the study. The more common demographic variables were chosen. These were sex, age, class in school and marital status. A final variable unique to a university setting was also examined. That variable was the type of housing

area in which the subjects lived. The subjects were grouped by low and high dissonance as previously described. Chi-squares were used to test the relationship of the individual demographic variables and the level of dissonance. In each of the tests the null hypothesis was that the variable and dissonance were independent of each other.

Sex.--Subjects were grouped within the two dissonance groups by the classification variable sex. The Chi-square analysis for this grouping is presented in Table 13.

TABLE 13

CHI-SQUARE ANALYSIS BETWEEN DISSONANCE GROUPS AND SEX

Group	N	Male	Female	df	χ^2
Low Dissonance	75	15	60	1	5.99*
High Dissonance	30	13	17		

*$p < .05$

The hypothesis of no relationship between the variables of dissonance and sex was rejected. The group of sixty females with low dissonance was the group which established the relationship between the two variables.

Age.--A 2 × 2 Chi-square was calculated between the dissonance groups and two age groups. The age groups were those subjects twenty years old or less and those above twenty. Table 14 presents the results.

TABLE 14

CHI-SQUARE ANALYSIS BETWEEN DISSONANCE GROUPS AND AGE

Group	N	20 Years or Younger	Above 20	df	χ^2
Low Dissonance	75	42	33	1	.75
High Dissonance	30	14	16		

Results of the analysis indicated that the two variables were independent of one another. Level of dissonance does not appear to be a function of the subject's age. Within both dissonance groups the division of subjects into age categories was relatively even (42 and 33; 14 and 16).

Class.--The relationship between the variables of dissonance level and class within the university was analyzed with a 2 × 3 Chi-square. Table 15 contains the results of this analysis.

TABLE 15

CHI-SQUARE ANALYSIS BETWEEN DISSONANCE GROUPS AND CLASS STATUS

Group	N	Sophomore	Junior	Senior	df	χ^2
Low Dissonance	75	7	56	12	2	5.83*
High Dissonance	30	2	15	13		

*$p < .05$

The results support the relationship between dissonance level and the subject's classification. This relationship results from the large percentage of the low dissonance group being classified as juniors (74 percent) and a smaller percentage (16) being seniors.

Housing.--There has been speculation that different types of students with unique attitudes utilize particular types of housing while in attendance at the University. Subjects were grouped by housing area and dissonance level. Three groups were formed: those living independently; those in dormitories; and other, including those living at home and in fraternities and sororities. The results are reported in Table 16.

TABLE 16

CHI-SQUARE ANALYSIS BETWEEN DISSONANCE GROUPS AND HOUSING AREA

Group	N	Independent	Dormitory	Other	df	χ^2
Low Dissonance	75	51	11	13	2	1.28
High Dissonance	30	22	2	6		

The Chi-square value indicates that housing area and dissonance level are not dependent upon each other. The data would not support the concept of a relationship between dissonance level and the subject's type of housing.

Marital Status.--The final relationship to be examined by the use of a Chi-square was that between dissonance and marital status. Table 17 summarizes the results.

TABLE 17

CHI-SQUARE ANALYSIS BETWEEN DISSONANCE GROUPS AND MARITAL STATUS

Group	N	Single	Married	Divorced	Separated	df	χ^2
Low Dissonance	74*	55	15	4	0	3	7.21
High Dissonance	30	24	4	0	2		

*One subject did not indicate marital status.

The resultant Chi-sqaure value failed to support a relationship between the variables. Therefore, it is concluded that marital status and dissonance level are independent of each other.

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

Summary

By definition, career choice is a decision process. A general career choice model presents a person with a series of choices. Decisions must be made involving the following: (1) entrance into a university, (2) choosing a college within the university, (3) remaining in the program of the college, and (4) entry into an occupation.

Festinger's theory of cognitive dissonance served as the theoretical framework through which the problem was viewed. The theory maintains that following a decision a person experiences an unpleasant state caused by the realization that the results of the decision do not measure up to the person's expectations and the realization that the choice has denied him some of the attractive alternatives.

Theoretically, cognitive dissonance is present following a decision as a result of alternatives which offer relatively equal attractiveness. Career decisions are likely to represent compromise and because a compromise is the result of negotiation between attractive alternatives it would therefore encourage dissonance. The series of decisions present in the career choice situation provides opportunities for both the introduction and the accumulation of cognitive dissonance.

Students used in the study were involved in the process of vocational choice. The specific decisions leading to a career in teaching

follow the pattern established in the general career decision model. Having decided to enter the Education Professions Division the student faces several points at which the decision on remaining in the program must be made. Decision points of this type are the following: (1) the completion of basic coursework, (2) the completion of methods courses, (3) the completion of student teaching, and (4) initial entry into the profession.

Subjects were enrolled in Education 3422 which is the first course taken in the undergraduate sequence following admission into the Education Professions Division. That admission marked one of the first decisions leading to a teaching career. It was at this point that the study intended to investigate the existence of dissonance.

Approximately one-third of the sample indicated that they had no intention of entering a teaching career upon graduation. Student evaluation of Education 3422 was used as the measure reflecting dissonance. A difference in dissonance level was found between the group planning to teach and the group planning not to teach. Dissonance level was higher in the group which was not planning to teach. The two groups were then used as the basis for the investigation of several additional questions.

In the low dissonance group the question of the relationship between the anticipated length of service in a teaching career and the level of dissonance was investigated. The high dissonance group was used to explore the question of whether or not the level of dissonance increased as the subjects progressed through the program.

Two additional comparisons between the low and high dissonance groups were conducted. The first dealt with the relationship between

dissonance level and the amount of effort the student perceived having expended for the course. The relationship of dissonance level to two achievement variables (grade in Education 3422 and current GPA) was the second comparison conducted between the two groups.

All subjects were used in the investigation of two other questions. One dealt with differences in dissonance levels between students enrolled in the College of Education and the College of Arts and Sciences. Differences in dissonance level between elementary and secondary certificate levels was the final major question investigated. The final analysis conducted was a series of tests between the two original dissonance groups and their classification in a series of common demographic variables. The variables used were sex, age, class, housing area and marital status of the subject.

Conclusions

Based on the results of this study the following conclusions were reached.

1. Dissonance was found to be present in the students enrolled in Education 3422. Low ratings of course usefulness indicate that the course did not fulfill the subjects' expectations. The course was consistently rated low; the mean rating given by the entire sample being only 3.96 on a nine-point scale.

The group planning not to teach experienced a higher degree of dissonance. Their rating of the course was 2.93 compared to a rating of 4.37 given by the group planning to teach. The group was less committed to a teaching career and viewed the required course, Education

3422, as being of little value. The non-teaching group experienced a significantly higher degree of dissonance.

2. The anticipated length of teaching service did not appear to be a factor relating to the level of dissonance experienced by the low dissonance group. Vocational plans for five and ten years in the future may have both been perceived as simply being future plans; the students did not discriminate between the different time periods.

3. The dissonance level of the high dissonance group (planning not to teach) became more intense as they progressed into the program. Their mean rating (4.17) of Education 2424, School in the American Culture, was lower than that of both the low dissonance group (4.96) and the total group (4.73). The mean rating given Education 3422 (2.93) indicated a significant increase in dissonance. The results may be indicative of the beginning of a trend. If the trend of increasing dissonance continues it will become necessary for members of the group to take action to reduce the dissonance.

4. Students with a low degree of dissonance perceived themselves as expending a significantly greater amount of effort for the course. This is supportive of dissonance theory. This group saw a greater amount of value in the course. This lowered the dissonance level because the subjects saw themselves as working hard for something of value. By comparison the other group, being highly dissonant, saw little of value and therefore perceived themselves as not expending a large amount of effort.

5. Dissonance was related to the achievement variables of grade achieved in Education 3422 and current GPA. Differences between the two dissonance groups indicated that the low dissonance group was higher on

both achievement variables. This is reflective of the higher degree of commitment to a career by the low dissonance group. The high dissonance group may be unsure of the career choice made and they may, in fact, also be likely to be unsure of any career choice.

6. No difference in dissonance level was found between the two colleges in which the majority of the subjects were enrolled. This lends further support to the conclusion that the factor of commitment or non-commitment to a career in teaching was a major source of dissonance. Dissonance caused by career choice, not by college enrollment, was the key to attrition.

7. The dissonance level was not a function of the level (elementary or secondary) of certificate program. This result is also seen as supportive of the dissonance being generated by a source other than certificate level. This source was probably the degree of commitment to the career choice that was made.

8. Three demographic variables, age, housing area, and marital status were independent of dissonance groups. No relationship between the variables and dissonance could be established. The variables were not seen as contributing to the dissonance level of either group.

9. Sex of the subject appeared to be related to dissonance level. This was not surprising since 80 percent of the low dissonance group was female. They represented that group that has traditionally been viewed as being more institutionalized and more supportive of school programs.

10. Dissonance and class standing were also shown as being non-independent. The majority of the subjects (seventy-one or 68 percent) were juniors. The proportions between the high and low dissonance groups

were similar for students in the sophomore and junior classes. However, a shift was noted in the senior class. Decisions to teach are made early. Those students who wait until their senior year are more dissonant. Dissonance level is more of a factor when the career choice is made late in the college career. This would appear to indicate that it is at that point in their college program that career choices were being made.

Implications

Dissonance has been shown to be present among students enrolled in Education 3422. This occurrence can have numerous implications. It is possible that the course as now structured may have little value for the future teacher. On the other extreme the problem could lie in inadequate perceptions on the part of the students as to what the role and responsibilities of a teacher really are. Implied is an approach which must bridge the gap between the world of psychological theory and that of the real classroom. An effort must be made to both hear and meet the expressed needs of the student while simultaneously educating them to the importance of the psychological principles involved. The course must also be examined to determine its relevance.

The theory of cognitive dissonance allows for different methods to be used in the reduction of the dissonance. Dissonance can be reduced by altering the perceptions of the individual. This is not easily accomplished. Implied is the addition of new information. One suggestion would be the development of an orientation program emphasizing the role of the teacher and the relationship of the "practical" and the "theoretical." Another suggestion might be to adjust the format of the

course to present many of the psychological principles in a classroom or problematic situation.

The relocation of Education 3422 within the sequence might be another viable alternative. It might be possible to require Psychology of Childhood (Education 3443) or Psychology of Adolescense (Education 3463) before Education 3422. This would involve the subjects in learning about the growth and development of children before attempting to relate the psychological principles as taught in Education 3422 to the classroom setting. Another alternative would be to relocate Education 3422 to a position following the methods courses. This would allow for review of the classroom techniques in light of psychological principles. This positioning of Education 3422 might also increase the carryover of the principles into the student teaching experience.

When dissonance reaches a sufficient level it can be reduced by altering the situation. This is often done through the reversal of a decision. Such an approach would result in the subject either dropping out of the Education Professions Division or not entering the profession upon graduation.

Results which indicated that the high dissonance group experienced an increase in dissonance as they progressed in the program implies a situation ready for dissonance reduction by a decision reversal. By their decision to be admitted to the program this group indicated that education was more desirable than other fields. This group is seen as potential students for a non-certificate program. This program, however, must be strenuous enough so that the student will feel that it is of value.

There are some students who will experience dissonance and not be able to have it reduced. Although they are in a dissonant situation they are encountering less dissonance than would be created by a decision reversal. Therefore, they will remain in the program.

In summary the results imply a strategy calling for an approach to reduce dissonance where possible through a number of possible alternatives including: a career orientation program, a new format for Education 3422, relocation of Education 3422 in the sequence of courses, or implementation of a non-certificate program.

Recommendations for Further Research

The most pressing suggestion for further research involves the follow-up of the students used for this study. The theory of cognitive dissonance was found to be applicable at the first major decision point in the teacher education career choice model. The question or whether the dissonance level in the high dissonance group will continue to rise should be investigated. Each decision point affords the opportunity for the subjects to reduce dissonance by reversing the decision and withdrawing from the program. Carried to its logical conclusion data should be gathered on the subjects until they have entered a profession. The study just completed provides the base necessary for the future research.

Additional research could be conducted on the demographic variables of sex and class within the university. Does the relationship between these variables and dissonance remain as the subjects progress on to later decision points in the model?

Research might also be encouraged within other colleges. Students within other colleges are also involved in a series of career choices. Is the theory of cognitive dissonance applicable in career decision models in other colleges as it was in education?

Finally, research into the problem could be conducted at a different type of institution such as teacher's colleges. Would the same results be forthcoming from an institution, either public or private, whose entire program is based upon teacher training. The results of such research may shed light on both the type of student attending and the type of teacher produced by different types of institutions of higher education.

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APPENDIX A

FOLLOW-UP OF REGISTRANTS

FIRST YEAR GRADUATES

FOLLOW-UP OF REGISTRANTS

FIRST YEAR GRADUATES

1967-1968

348 - Registered with Teacher Placement Division

208 - Teaching in major field

7 - Teaching in field other than major

101 - Not teaching--employed in other fields

32 - Failure to reply or to complete registration

1969-1970

467 - Registered with Teacher Placement Division

242 - Teaching in major field

12 - Teaching in field other than major

126 - Not teaching--employed in other fields

87 - Failure to reply or to complete registration

1970-1971

508 - Registered with Teacher Placement Division

196 - Teaching in major field

156 - Not teaching--seeking employment as a teacher

86 - Not teaching--employed in other fields

70 - Failure to reply or to complete registration

APPENDIX B

DATA COLLECTION INSTRUMENT

PROFESSIONAL PLANNING QUESTIONNAIRE

DATA COLLECTION INSTRUMENT

PROFESSIONAL PLANNING QUESTIONNAIRE

Directions: Respond to each item by marking the number on the answer sheet which corresponds to your response. Although the responses range from 0-9, the 0 response will never be used.

1. Sex
   1. male
   2. female

2. What is your age?
   1. 20 or under
   2. 21 through 25
   3. 26 through 30
   4. 31 through 35
   5. 36 or older

3. What is your classification at OU? (at the completion of current semester)
   1. freshman
   2. sophomore
   3. junior
   4. senior
   5. unclassified
   6. graduate

4. In what college are you currently enrolled?
   1. arts and sciences
   2. business administration
   3. education
   4. engineering
   5. fine arts
   6. graduate
   7. university college
   8. other

5. What is your major?
   1. elementary education
   2. social studies
   3. language arts
   4. foreign language
   5. science education
   6. math education
   7. physical education
   8. special education
   9. other

6. What general certificate program are you enrolled in?
   1. communications--includes foreign language, public school librarian, journalism, language arts, speech and drama
   2. fine arts--includes vocal music, instrumental music, combined music, art
   3. math-science--includes mathematics, biological science, earth science, physical science
   4. business and vocational--includes business education, bookkeeping and clerical practice, vocational business and office education, vocational home economics
   5. social studies
   6. special education
   7. elementary education
   8. health and physical education
   9. early childhood education

7. Indicate in which of the following housing areas you reside. (the term commuter refers to anyone living off of the campus)
   1. dormitory
   2. sorority
   3. fraternity
   4. commuter--living at home of parents
   5. commuter--not living at home of parents

8. What is your current marital status?
   1. single
   2. married
   3. divorced
   4. widowed
   5. legally separated
   6. other

9. Do you have any children?
   1. yes
   2. no

10. If you answered yes on question 9 indicate the number of children you have.
   1. one child
   2. two children
   3. three children
   4. four children
   5. five children
   6. more than five children

11. Have you ever been employed in a full-time instructional capacity?
   1. yes
   2. no

12. If you answered yes to question 11 indicate the number of years of experience you had in that capacity.
    1. one year or less
    2. two years
    3. three years
    4. four years
    5. five years
    6. six to ten years
    7. more than ten years

13. How many hours of education courses have you completed? (include those hours in which you are currently enrolled)
    1. 0-4
    2. 5-7
    3. 8-10
    4. 11-13
    5. 14 and above

14. How many hours have you completed in your major? (include current enrollment)
    1. 0-5
    2. 6-10
    3. 11-15
    4. 16-20
    5. 20 and above

15. How many hours have you taken in other courses; not education courses or your major? (include current enrollment)
    1. 0-5
    2. 6-10
    3. 11-15
    4. 16-20
    5. 20 and above

16. What are your vocational goals upon graduation from OU?
    1. elementary teacher
    2. secondary teacher
    3. school administrator (business manager, vice principal, principal, superintendent, assistant superintendent)
    4. school specialist (librarian, counselor, media, reading, special education, speech therapist)
    5. housewife
    6. military service
    7. employment in business
    8. employment in industry
    9. other

17. What are your vocational plans for 5 years after your graduation from OU?
    1. elementary teacher
    2. secondary teacher
    3. school administrator (business manager, vice principal, principal, superintendent, assistant superintendent)
    4. school specialist (librarian, counselor, media, reading, special education, speech therapist)
    5. housewife
    6. military service
    7. employment in business
    8. employment in industry
    9. other

18. What are your vocational plans for 10 years after your graduation from OU?
    1. elementary teacher
    2. secondary teacher
    3. school administrator (business manager, vice principal, principal, superintendent, assistant superintendent)
    4. school specialist (librarian, counselor, media, reading, special education, speech therapist)
    5. housewife
    6. military service
    7. employment in business
    8. employment in industry
    9. other

The following four questions ask you to evaluate the usefulness of courses you have taken at OU. Rate the courses from 1-9. The most useful courses should be rated 9; the least useful 1.

19. How useful in your future employment is the course The School in American Culture (Ed 2424)?

20. How useful in your future employment is the course Psychology in Education (Ed 3422)?

21. How useful in your future employment are the courses in your major?

22. How useful in your future employment are your other courses?

The following four questions ask you to rate courses in terms of the amount of effort you put into them. Again use the 1-9 scale with the higher score indicating a greater amount of effort.

23. School in American Culture

24. Psychology in Education

25. Courses in your major

26. Other courses

APPENDIX C

SUMMARY BY GROUP OF RESPONSES GIVEN ON THE PROFESSIONAL PLANNING QUESTIONNAIRE

TABLE 18

SUMMARY OF RESPONSES GIVEN BY GROUP ON THE PROFESSIONAL PLANNING QUESTIONNAIRE

Item	Frequency of Responses					
	Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
1. Sex						
Male	15	20	13	43	28	27
Female	60	80	17	57	77	73
2. Age						
20 or under	42	56	14	47	56	53
21 through 25	27	36	15	50	42	40
26 through 30	2	3	1	3	3	3
31 through 35	1	1	0		1	1
36 or older	3	4	0		3	3
3. Classification						
Freshman	0		0		0	
Sophomore	7	9	2	7	9	9
Junior	56	75	15	50	71	68
Senior	12	16	13	43	25	24
Unclassified	0		0		0	
Graduate	0		0		0	
4. College Enrollment						
Arts and Sciences	21	28	13	43	34	32
Business Adm.	0		1	3	1	1
Education	51	68	15	50	66	63
Engineering	0		0		0	
Fine Arts	2	3	0		2	2
Graduate	0		0		0	
Univ. College	1	1	1	3	2	2
Other	0		0		0	
5. Major						
Elementary Educ.	11	15	3	10	14	13
Social Studies	9	12	2	7	11	10
Language Arts	1	1	2	7	3	3
Foreign Language	5	7	1	3	6	6
Science Educ.	6	8	1	3	7	7

TABLE 18--Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
5. Major (cont.)						
Math Education	3	4	3	10	6	6
Physical Educ.	4	5	1	3	5	5
Special Educ.	22	29	2	7	24	23
Other	14	19	15	50	29	28
6. General Certificate Program						
No certificate	2	3	6	20	8	8
Communications	12	16	4	13	16	15
Fine Arts	3	4	0		3	3
Math-Science	7	9	4	13	11	10
Business and Vocational Educ.	3	4	4	13	7	7
Social Studies	9	12	3	10	12	11
Special Educ.	20	27	3	10	23	22
Elementary Educ.	13	17	4	13	17	16
Health and Physical Educ.	4	5	1	3	5	5
Early Childhood Education	2	3	1	3	3	3
7. Housing Area						
Dormitory	11	15	2	7	13	12
Sorority	9	12	4	13	13	12
Fraternity	0		1	3	1	1
Commuter--at Home	4	5	1	3	5	5
Commuter--on Own	51	68	22	73	73	70
8. Marital Status						
Single	55	73	24	80	79	75
Married	15	20	4	13	19	18
Divorced	4	5	0		4	4
Widowed	0		0		0	
Legally Separated	0		2	7	2	2
Other	1	1	0		1	1
9. Children						
Yes	12	16	4	13	16	15
No	63	84	26	87	89	85

TABLE 18--Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
10. Number of Children						
None	63	84	26	87	89	85
One	6	8	2	7	8	8
Two	1	1	2	7	3	3
Three	5	7	0		5	5
Four	0		0		0	
Five	0		0		0	
More than five	0		0		0	
11. Previous Full-Time Experience						
Yes	7	9	3	10	10	10
No	68	91	27	90	95	90
12. Years of Experience						
None	68	91	27	90	95	90
One or less	7	9	2	7	9	9
Two	0		0		0	
Three	0		1	3	1	1
Four	0		0		0	
Five	0		0		0	
Six to Ten	0		0		0	
More than Ten	0		0		0	
13. Hours of Education Courses Completed						
0-4	2	3	3	10	5	5
5-7	38	51	13	43	51	49
8-9	16	21	5	17	21	20
11-13	3	4	6	20	9	9
14 and above	16	21	3	10	19	18
14. Hours Completed in Major Field						
0-5	8	11	0		8	8
6-10	12	16	4	13	16	15
11-15	11	15	5	17	16	15
16-20	8	11	6	20	14	13
20 and above	36	48	15	50	51	49

TABLE 18-- Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75) N	%	Subjects not Planning to Teach (N = 30) N	%	Total Subjects (N = 105) N	%
15. Hours Completed in Other Courses						
0-5	4	5	0		4	4
6-10	3	4	4	13	7	7
11-15	3	4	2	7	5	5
16-20	4	5	1	3	5	5
20 and above	61	81	23	77	84	80
16. Vocational Goals-- Graduation						
Elem. Teacher	15	20	0		15	14
Sec. Teacher	32	43	0		32	30
School Adm.	1	1	0		1	1
School Specialist	27	36	0		27	26
Housewife	0		2	7	2	2
Military Service	0		1	3	1	1
Business	0		7	23	7	7
Industry	0		0		0	
Other	0		20	67	20	19
17. Vocational Goals-- 5 Yrs. After Grad.						
Elem. Teacher	8	11	4	13	12	11
Sec. Teacher	18	24	2	7	20	19
School Adm.	1	1	0		1	1
School Specialist	23	31	2	7	25	24
Housewife	11	15	1	3	12	11
Military Service	0		1	3	1	1
Business	3	4	5	17	8	8
Industry	0		0		0	
Other	11	15	15	50	26	25
18. Vocational Goals-- 10 Yrs. After Grad.						
Elem. Teacher	8	11	2	7	10	10
Sec. Teacher	12	16	2	7	14	13
School Adm.	1	1	0		1	1
School Specialist	19	25	2	7	21	20
Housewife	15	20	2	7	17	16

TABLE 18--Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
18. Vocational Goals--10 Yrs. After Grad. (cont.)						
Military Service	0		0		0	
Business	4	5	4	13	8	8
Industry	1	1	0		1	1
Other	15	20	18	60	33	31
*19. Usefulness of Education 2424						
1	8	11	8	27	16	15
2	5	7	2	7	7	7
3	14	19	3	10	17	16
4	8	11	2	7	10	10
5	10	13	9	30	19	18
6	8	11	0		8	8
7	5	7	0		5	5
8	6	8	3	10	9	9
9	11	15	3	10	14	13
*20. Usefulness of Education 3422						
1	11	15	12	40	23	22
2	4	5	4	13	8	8
3	11	15	5	17	16	15
4	12	16	2	7	14	13
5	15	20	1	3	16	15
6	10	13	3	10	13	12
7	7	9	2	7	9	9
8	1	1	1	3	2	2
9	4	5	0		4	4
*21. Usefulness of Courses in Major Field						
1	3	4	1	3	4	4
2	1	1	1	3	2	2
3	3	4	0		3	3
4	3	4	5	17	8	8
5	6	8	5	17	11	10
6	8	11	2	7	10	10

TABLE 18--Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
*21. Usefulness of Courses in Major Field (cont.)						
7	9	12	1	3	10	10
8	14	19	5	17	19	18
9	28	37	10	33	38	36
*22. Usefulness of Other Courses						
1	8	11	1	3	9	9
2	6	8	3	10	9	9
3	9	12	1	3	10	10
4	17	23	2	7	19	18
5	7	9	6	20	13	12
6	8	11	7	23	15	14
7	10	13	8	27	18	17
8	4	5	0		4	4
9	6	8	2	7	8	8
*23. Effort Expended--Education 2424						
1	2	3	4	13	6	6
2	3	4	2	7	5	5
3	6	8	6	20	12	11
4	8	11	2	7	10	10
5	18	24	4	13	22	21
6	6	8	0		6	6
7	8	11	5	17	13	12
8	13	17	5	17	18	17
9	11	15	2	7	13	12
*24. Effort Expended--Education 3422						
1	4	5	6	20	10	10
2	7	9	3	10	10	10
3	11	15	4	13	15	14
4	8	11	4	13	12	11
5	18	24	5	17	23	22
6	9	12	5	17	14	13
7	7	9	2	7	9	9
8	6	8	1	3	7	7
9	5	7	0		5	5

TABLE 18--Continued

Item	Frequency of Responses: Subjects Planning to Teach (N = 75)		Subjects not Planning to Teach (N = 30)		Total Subjects (N = 105)	
	N	%	N	%	N	%
*25. Effort Expended-- Courses in Major Field						
1	0		0		0	
2	1	1	1	3	2	2
3	2	3	1	3	3	3
4	1	1	0		1	1
5	8	11	3	10	11	10
6	6	8	2	7	8	8
7	17	23	8	27	25	24
8	13	17	6	20	19	18
9	27	36	9	30	36	34
*26. Effort Expended-- Other Courses						
1	5	7	0		5	5
2	0		1	3	1	1
3	2	3	0		2	2
4	3	4	5	17	8	8
5	14	19	2	7	16	15
6	15	20	6	20	21	20
7	19	25	8	27	27	26
8	11	15	7	23	18	17
9	6	8	1	3	7	7
**27. Grade Achieved in Education 3422						
A	24	32	7	23	31	30
B	28	37	13	43	41	39
C	23	31	8	27	31	30
D	0		2	7	2	2
F	0		0		0	

*Items 19 through 26 required ratings to be given by the respondent. In all cases a nine-point scale was used with nine being the highest rating possible.

**The data on item 27 were added after the completion of the course.