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The Ohio State University

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TRAITS CHARACTERISTIC OF EDUCATIONALLY AND VOCATIONALLY UNDECIDED AND DECIDED STUDENTS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for The Degree Doctor of Philosophy in the Graduate School of The Ohio State University

By
C. Louise Kafer, B.S., M.S.

* * * * *

The Ohio State University
1981

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ACKNOWLEDGMENTS

I want to acknowledge my adviser, Herman J. Peters, for his encouragement and for providing me with the opportunity to explore and to learn.

I am indebted to Professor Richard C. Kelsey and to Professor James E. Kerber for their support and for their assistance.

My sincere appreciation is extended to my family, Kenneth, Kim, Kaye and Karen, for their patience and for their understanding.
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Studies in Teacher Education. Professor James E. Kerber
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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Research data (Wexler, 1979) reveal that about twenty to thirty percent of all college freshmen who enroll in an institution of higher learning are undecided in vocational choice and are unable to select a tentative major when enrolling. In our society, educational and vocational choice emerge as a major problem for America's young people. Students are entering the colleges and universities each year without any specific career objective other than obtaining a college degree.

From research (Lunneborg, 1975) it may be speculated that the incidence of educational and vocational indecision is increasing in college and university populations. A considerable number of students question their choice of a vocation and change their major during their college experience. This makes the undecided student a subject of concern because of the number of students (Titley and Titley, 1980) that fall in this category. Seminars in Career Planning at The Ohio State University are filled to capacity weeks prior to the opening of the quarter and
students have been closed out of the career development course regularly due to capacity enrollment.

Why do so many college students experience educational and vocational indecision? How do these students differ from students who have made educational and vocational commitments? Are there certain personality traits that are characteristic of the undecided students? Are there certain personality traits that are characteristic of the decided students? Are there demographic factors that differentiate the educationally and vocationally undecided students from the educationally and vocationally decided students? At present, the relationships among personality traits and demographic factors, and educational and vocational behavior remain unclear.

The extent of the implications of these questions are multitudinous and multifarious. In an attempt to provide a partial answer to these complex questions, this study will examine some personality traits and demographic factors which may be characteristic of educationally and vocationally undecided students and educationally and vocationally decided students and make some comparative analyses.

The Problem

The major purpose of this study was an attempt to develop an understanding of the personality factors and demographic factors that might differentiate the
educationally and vocationally undecided from the educationally and vocationally decided students. There may, indeed, be a multitude of factors that are significant in identifying the lack of decisiveness but this study was limited to examining twenty-two personality traits and to examining nine demographic factors.

More specifically, the study sought to determine the needs that were characteristic of each group by administering the Personality Research Form (Jackson, 1971) and a demographic information form to both groups of students. In order to study this problem, the following questions were addressed:

1. Are there certain personality traits that are characteristic of the undecided students?
2. Are there certain personality traits that are characteristic of the decided students?
3. How do the undecided and decided students compare on the twenty-two traits measured?
4. Are there demographic factors that are characteristic of the undecided students?
5. Are there demographic factors that are characteristic of the decided students?
6. How do the undecided and decided students compare on these nine demographic factors?

A further purpose of the study was to derive implications from the patterns of the relationship of the
personality traits and demographic factors among educationally and vocationally undecided and decided students.

In this study, students who were designated as educationally and vocationally undecided were those students who had enrolled in the course, Education: Special Services, 270. This Seminar in Career Development was an elective course designated to help students examine the self in relation to educational and career goals. The focus was on self-assessment, decision making identification, occupational information and work adjustment skills.

It would seem that in our society the undecided student had distinct disadvantages. It certainly would not be wrong to be undecided but it might be academically inconvenient, socially uncomfortable, emotionally frustrating and monetarily expensive since The Ohio State University program has mandated that a student must declare a major program of study after having completed ninety credit hours of study. In reality, however, being undecided is a fact of life irrespective of academic status or age, for the process of living and growing is one of continued exploration and change.

Some undecided students who enrolled in the seminar were recommended by their academic advisers to take the course. Other students were enrolled in the course because their classmates, who had already experienced the course and found it helpful, had suggested the seminar to their
peers. Students who come to the counseling center for educational and career direction were also possible candidates for the Seminar in Career Development.

By and large, the students who were enrolled in Education: Special Services, 270, the Seminar in Career Development, were undecided college students who were looking for direction in educational and vocational planning.

In contrast to this, was a group of students who were enrolled in Education: Special Services, 271, a course entitled, Exploring Helping Relationships. This seminar was designed for examining a field experience in helping relationships. The focus of the course was on self-development, decision making and information regarding the world of work for students who wished to explore a career through placement in educational and community agency settings.

Students enrolled in this Seminar in Exploring Helping Relationships had tentatively decided on an educational direction and had tentatively made a career choice. For Educational majors, this Seminar was a prerequisite and had to be completed before students were admitted to the College of Education.

By and large, the students who were enrolled in Education: Special Services, 271, the Seminar in Exploring Helping Relationships, had tentatively decided on their educational and vocational direction at this point in time.
Seminar leaders have reported that most of the students enrolled in this program remain in their chosen field of study.

**Significance of the Study**

This study was an investigation to determine if there were differences in the personality traits and the demographic factors of the educationally and vocationally undecided and decided students. The twenty-two traits as measured by the Personality Research Form and the demographic information obtained might give some indication regarding the specific traits of the respective groups. If there were statistically significant relationships between the variables and educational and vocational undecidenedness or decidedness the information gleaned might serve as a guide in curriculum planning and counseling for staff personnel involved in Career Education. The data obtained might help clarify some of the forces that might be important in shaping a student's general approach to educational and vocational decision making. If specific traits or identified weaknesses existed, this information would aid the staff in guiding and counseling the student.

A direct application of the Personality Research Form might also be used in vocational counseling. By noting the predominant traits on the subject's profile some information might be obtained that would give direction to the undecided
student of the probability of success in certain vocational areas.

**Definition of Terms**

The following are terms used throughout this study:

**Undecided:** refers to the students who have not made an educational or vocational decision. These are the students who have enrolled in the Career Development Seminar.

**Decided:** refers to the students who have made a tentative educational and vocational decision. These are the students who have enrolled in the Seminar in Exploring Helping Relationships.

**Exploring Helping Relationships:** refers to exploring careers through placement in educational and community agency settings.

**Demographic Factors:** refers to the nine traits measured on the Education: Special Services Information Form (see Appendix B).

**Personality Research Form Scales:** refers to the twenty-two traits measured on the personality inventory. Jackson's scale, listed in Table 1, gives a description of a high scorer and lists defining trait adjectives.

**TABLE 1**

PERSONALITY RESEARCH FORM SCALES

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<th>Scale</th>
<th>Description of High Scorer</th>
<th>Defining Trait Adjectives</th>
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<tr>
<td>Abasement</td>
<td>Shows a high degree of humility; accepts blame and criticism even when not deserved; exposes himself to situations where he is in an inferior position; tends to be self-effacing.</td>
<td>meek, self-accusing, self-blaming, obsequious, self-belittling, surrendering, resigned, self-critical, humble, apologizing, subservient.</td>
</tr>
<tr>
<td>Scale</td>
<td>Description of High Scorer</td>
<td>Defining Trait Adjectives</td>
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<td>--------------</td>
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<tr>
<td>achievement</td>
<td>Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put effort to attain excellence.</td>
<td>striving, accomplishing, capable, purposeful, attaining, industrious achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive.</td>
</tr>
<tr>
<td>affiliation</td>
<td>Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people.</td>
<td>neighborly, loyal, warm, amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable.</td>
</tr>
<tr>
<td>aggression</td>
<td>Enjoys combat and argument; easily annoyed; sometimes willing to hurt people to get his way; may seek to &quot;get even&quot; with people whom he perceives as having harmed him.</td>
<td>aggressive, quarrelsome, irritable, argumentative, threatening, attacking, antagonistic, pushy, hot-tempered, easily-angered, hostile.</td>
</tr>
<tr>
<td>autonomy</td>
<td>Tries to break away from restraints, confinement, or restrictions of any kind; enjoys being unattached, free, not tied to people, places, or obligations; may be rebellious when faced with restraints.</td>
<td>unmanageable, free, self-reliant, independent, autonomous, rebellious, unconstrained, individualistic, ungovernable, self-determined.</td>
</tr>
<tr>
<td>change</td>
<td>Likes new and different experiences; dislikes routine and avoids it; may readily change opinions or values in different circumstances; adapts readily to changes in environment.</td>
<td>inconsistent, fickle, flexible, unpredictable, wavering, mutable, adaptable, changeable, irregular, variable, capricious, innovative.</td>
</tr>
<tr>
<td>cognitive structure</td>
<td>Does not like ambiguity or uncertainty in information; wants all questions answered completely; desires to make decisions based upon definite knowledge, rather than upon guesses or probabilities.</td>
<td>precise, exacting, definite, seeks certainty, meticulous, perfectionistic, clarifying, explicit, accurate, rigorous, literal, avoids ambiguity.</td>
</tr>
<tr>
<td>Scale</td>
<td>Description of High Scorer</td>
<td>Defining Trait Adjectives</td>
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<tr>
<td>Defendence</td>
<td>Readily suspects that people mean him harm or are against him; ready to defend himself at all times; takes offense easily; does not accept criticism readily.</td>
<td>self-protective, justifying, denying, defensive, self-condoning, suspicious, secretive, has a &quot;chip on the shoulder,&quot; resists inquiries, protesting.</td>
</tr>
<tr>
<td>Dominance</td>
<td>Attempts to control his environment, and to influence or direct other people; expresses opinions forcefully; enjoys the role of leader and may assume it spontaneously.</td>
<td>governing, controlling, commanding, domineering, influential, persuasive, forceful, ascendant, leading, directing, dominant, assertive.</td>
</tr>
<tr>
<td>Endurance</td>
<td>Willing to work long hours; doesn't give up quickly on a problem; persevering, even in the face of great difficulty; patient and unrelenting in his work habits.</td>
<td>persistent, determined, steadfast, enduring, un-faltering, persevering, unremitting, relentless, tireless, dogged, energetic.</td>
</tr>
<tr>
<td>Exhibition</td>
<td>Wants to be the center of attention; enjoys having an audience; engages in behavior which wins the notice of others; may enjoy being dramatic or witty.</td>
<td>colorful, entertaining, unusual, spellbinding, exhibitionistic, conspicuous, noticeable, expressive, ostentatious, immodest.</td>
</tr>
<tr>
<td>Harmavoidance</td>
<td>Does not enjoy exciting activities, especially if danger is involved; avoids risk of bodily harm; seeks to maximize personal safety.</td>
<td>fearful, withdraws from danger, self-protecting, pain-avoidant, careful, cautious, seeks safety, timorous, apprehensive.</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>Tends to act on the &quot;spur of the moment&quot; and without deliberation; gives vent readily to feelings and wishes; speaks freely; may be volatile in emotional expression.</td>
<td>hasty, rash, uninhibited, spontaneous, reckless, irrepressible, quick-thinking, mercurial.</td>
</tr>
<tr>
<td>Order</td>
<td>Concerned with keeping personal effects and surroundings neat and organized; dislikes clutter, confusion, lack of organization.</td>
<td>neat, organized, tidy, systematic, well-ordered, disciplined, prompt, consistent, orderly, clean, methodical, scheduled.</td>
</tr>
<tr>
<td>Scale</td>
<td>Description of High Scorer</td>
<td>Defining Trait Adjectives</td>
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<tr>
<td>Play</td>
<td>Does many things &quot;just for fun;&quot; spends a good deal of time participating in games, sports, social activities, and other amusements.</td>
<td>playful, jovial, jolly, pleasure-seeking, merry, laughter-loving, joking, frivolous.</td>
</tr>
<tr>
<td>Sentience</td>
<td>Notices smells, sounds, sights, tastes, and the way things feel; remembers these sensations and believes that they are an important part of life.</td>
<td>aesthetic enjoys physical sensations, observant, earthy, aware, notices environment, feeling, sensitive, sensuous.</td>
</tr>
<tr>
<td>Social Recognition</td>
<td>Desires to be held in high esteem by acquaintances; concerned about reputation and what other people think of him.</td>
<td>approval seeking, proper, well-behaved, seeks recognition, courteous, makes good impression, seeks respectability, accommodating.</td>
</tr>
<tr>
<td>Succorance</td>
<td>Frequently seeks the sympathy, protection, love, advice, and reassurance of other people; may feel insecure or helpless without such support.</td>
<td>trusting, ingratiating, dependent, entreating, appealing for help, seeks support, wants advice, helpless, confiding, needs protection.</td>
</tr>
<tr>
<td>Understanding</td>
<td>Wants to understand many areas of knowledge; values synthesis of ideas, verifiable generalization, logical thought.</td>
<td>inquiring, curious, analytical, exploring, intellectual, reflective, incisive, investigative.</td>
</tr>
<tr>
<td>Desirability</td>
<td>Describes self in terms judged as desirable; consciously or unconsciously, accurately or inaccurately, presents favorable picture of self in responses to personality statements.</td>
<td></td>
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</table>
Limitations

A multitude of other factors might also have been included but this study was limited to an investigation of the relationship of some personality traits and demographic factors that might be characteristic of educationally and vocationally undecided students and some personality traits and demographic factors that might be characteristic of the educationally and vocationally decided students as measured by the Personality Research Form and the demographic information form.

The educationally and vocationally undecided subjects were those students who had enrolled in Education: Special Services, 270, Seminar in Career Development, which was an elective course. It could be that students had enrolled in the course for other reasons but it will be assumed that students have enrolled to receive guidance and direction in their career choice and to learn some basic skills in relation to educational and vocational development.

The educationally and vocationally tentatively decided subjects were those students who had enrolled in Education: Special Services 271, Seminar in Exploring Helping Relationships, a required course for students prior to gaining admission to the College of Education. It might be that some students who had enrolled would decide, after completing the placement experience, to choose not to continue in their tentatively chosen field. However, it was assumed
that the students who had enrolled had made a tentative educational and vocational choice. The study may have yielded different results if the undecided had been compared with students who had declared majors in other fields such as: engineering, science, medicine, dentistry and journalism.

The number of students involved in the study was also limited. This study was limited to 105 randomly selected females and males who had enrolled in Education: Special Services, 270, the Seminar in Career Development, and 95 randomly selected females and males who had enrolled in Education: Special Services, 271, the Seminar in Helping Relationships.

The subjects for this study were enrolled in one of the largest colleges in the country; therefore, they may not be representative of students in other college environments or the students may not be representative of the non-college-student population.

The study was conducted late in Spring Quarter, 1981. Perhaps if given during Fall or Winter Quarters or earlier in Spring Quarter the results might vary.

The use of the Personality Research Form limited the generalizations that might be made in the study since only twenty-two traits were considered. Since there were only nine items on the demographic information form, the amount of information received was limited.
Organization of the Remainder of the Study

Chapter II presents a review of the literature related to the study. Chapter III describes the method and the instruments used to conduct the study. Chapter IV reports the findings. Chapter V includes a summary of the data, discusses conclusions, and presents recommendations for further study. The Appendixes include a copy of the instruments used and the Bibliography.
CHAPTER II

REVIEW OF LITERATURE

Introduction

This chapter presents a review of literature related to the study. The first section presents selected research relative to the personality and demographic traits that are characteristic of the undecided and decided students. The second section presents a summary of some theories relative to the study.

Personality and Demographic Traits

For more than four decades the educationally and vocationally undecided students, those who possess a considerable number of concerns, doubts, questions and frustrations about the choice of their future have been the subject of much speculation. Williamson (1939) identified the causes of vocational indecision as many, usually consisting of fear of lack of aptitude, fear of displeasing parents and friends, and fear of failure in a chosen occupation.

Many studies have been conducted in an attempt to determine what makes the undecided students different from those who are able to make educational and vocational
decisions. However, research findings regarding educational and vocational indecision are of a controversial nature.

Baird (1969) surveyed a sample of 12,000 undecided and decided students and concluded that undecided students were appreciably the same as the general student population in their vocational behavior. In a second study of approximately 60,000 college-bound students, Baird (1969) found the undecided students to be more intellectually oriented and less vocationally oriented than students who have made a career choice. He suggested that the college bound students were in a period of exploration and tentative choices, for college had provided the students an opportunity to experience the content of the fields they had considered. College experiences also suggested fields that the students might not have previously contemplated. In addition, Baird suggested that bright students might face educational and vocational indecision due to their capacity to do many things and thereby have many alternatives open to them.

Resnick, Fauble and Osipow (1970), suggested that a relationship existed between the level of the individual's self-esteem and the certainty of vocational choice for both male and female subjects. The results indicated that males who ranked high in self-esteem were more certain about their career choices than those males who ranked low in self-esteem. Women who had high self-esteem scores were more
certain about their career plans than women with low self-esteem scores.

These findings support the investigation of Marr (1965) regarding vocational indecision in which the undecided subject is described as less self-directing. The study indicated that most subjects who were self-directing decided upon their occupations early, while the subjects who were non-self-directing tended to make occupational decisions later. Subjects who had lower self-regard and who were non-self-directing were ambivalent about their occupational direction. These findings would support the work of Super (1957) who asserts that adolescents who have realistic and well-formulated self-concepts find their place in "the world of work" relatively early. Some counselors might agree that a student's choice of a vocation is an indication of a commitment and maturity. Likewise, a student's inability to make an educational and vocational decision is a sign of immaturity. Opinions vary widely; thus the phenomenon of educational and vocational indecision needs further research.

Ashby, Wall and Osipow (1966) studied first quarter college freshmen who were at varied stages in their identification of educational and vocational goals. These students from The Pennsylvania State University underwent extensive testing and considerable demographic data were obtained. The subjects were compared on personality,
achievement, aptitude, family and school factors. One major finding indicated that the most undecided subjects were more dependent than the other subjects but the undecided group was equal to the decided group in academic achievement. The undecided group possessed the academic wherewithal but the study indicated that the students would need guidance, support and encouragement in working out their career plans.

Elton and Rose (1971), in a longitudinal study, compared graduating seniors who were undecided as freshmen with seniors who had persisted in their declared major and with seniors who had immigrated or changed to another Holland (1966) category. No statistical significant differences were found on the personality ratings between the undecided students, the changers or the persistent students. However, the authors found a major discrepancy in the survival rate between the two groups; only 17% of the undecided freshmen continued to graduation as compared to 43% of those who stated a career choice.

Kimes and Troth (1974), found trait anxiety to be related to career decisiveness and satisfaction with career decision. In their study of 829 undergraduate students, they found that students who were completely undecided about a career were significantly more anxiety-prone than were students who had made a career choice. Five levels of satisfaction with career decisions were studied and results
indicated a tendency for anxiety-proneness to increase as the level of decisiveness decreased. The authors suggested that counselors should be aware of the anxiety level of the students and perhaps the individual would need to cope with the anxiety before making effective career decisions.

Holland and Holland (1977) designed a study to clarify the issue concerning characteristics attributed to students who were undecided or decided about a vocational choice. High school juniors were assessed on measures of personality, interest, decision-making and vocational attitude. Comparisons of undecided and decided students suggested that they were alike on most measures but differed in terms of their sense of identity and vocational maturity. The results suggested that undecided students lacked a clear sense of identity and implied interpersonal incompetency, lack of involvement, lack of self-confidence, anxiety and poor decision-making skills. Undecided students appeared as multiple subtypes who would need different personal and vocational approaches to career development.

It has often been assumed that vocationally undecided students are uncomfortable with their indecision but the results of Holland and Holland's study would suggest that a substantial number of vocationally undecided students felt relatively comfortable with their indecision. More than 50% of the undecided students reported that they did not have to make an immediate decision and that it did not seem
important to make a decision at this point in their lives.

Holland, in an interview with Weinrach (1980), had some suggestions for dealing with the undecided students. He suggested that "undecideds" discuss their tentative choices; for he believed that most people have choices, even though they say they are undecided. People seemed to want reassurance that their choices make sense. Holland leaned heavily on diagnostic tests and rating scales in vocational counseling situations.

Other researchers (Osipow, Carney and Barak, 1976) have also identified multiple causes of educational and vocational indecision in college students. Their study measured sixteen antecedents of educational and vocational indecision. Results indicated the following four factors characteristic of the undecided students: a lack of structure and confidence in making a vocational decision, a perception of external barriers, a positive choice conflict and a personal conflict concerning how to make the educational and vocational decision.

In another attempt to differentiate subtypes among vocationally undecided students, Jones and Chenery (1980) developed a model of vocational decision status and an assessment instrument, the "Vocational Decision Scale." This instrument assessed dimensions of decidedness, comfort with the decidedness level, and reasons for being undecided. The "Vocational Decision Scale" included Self-Uncertainty,
Choice/Work Salience and Transitional Self. Other diagnostic scales measuring a student's undecidedness have been developed by Osipow (1976) and Holland (1977). Jones and Chenery's findings supported their predictions that decidedness was associated with identity, career salience and with the choice stage. Persons in the Self-Uncertainty and Transitional Self stages appeared to be anxious and to lack a clear sense of identity. These results supported the study by Holland and Holland (1977) in which the "undecideds" were significantly correlated with anomy and identity.

In a study by Mendonca and Siess (1976) thirty-two university students who were vocationally undecided were counseled for indecisiveness. The study concluded that vocational indecision appeared to be due to lack of problem solving skills and lack of following through with chosen alternatives.

The findings of Harman's (1976) investigation, in which he studied vocationally undecided students who had either selected a major or who had not selected a major after individual counseling, indicated that any student could have problems of vocational identity. However, his findings did indicate that vocationally undecided males scored significantly lower on the Response Bias Scale which might suggest that undecided males may have more difficulty in concentrating on a situation for an extended period of time. It
also might indicate that the undecided student felt less positive about himself and his situation.

Greenhaus and Simon (1977) conducted a study attempting to relate career salience to vocational indecision. The results indicated that there was a tendency for high career salient students to have expressed a vocational preference. Vocational indecision was high among students of low career salience. Since salience refers to the priority or the relative importance of work and a career in one's life, a low level of career salience would indicate that work was not an important part of the student's life at that time. The data also indicated that the decided students placed more importance on intrinsic values than the undecided students. The findings would suggest that vocational indecision may reflect disinterest to the "world of work" by the students who ranked low in career salience. Vocational decisions were not given high priority and seemed relative unimportant to the low career salient students.

Walsh and Lewis (1972) studied congruent, incongruent and undecided career preferences of college freshmen and personality variables. The Vocational Preference Inventory was used to define the three groups. The results of the study were consistent with Holland's (1966) theory which suggested that congruent personality and environment relations were more conducive to stability achievement and satisfaction than incongruent interactions. Being congruent
would indicate that individuals tended to choose environments which were consistent with their personal orientations. Thus, scientific students would tend to choose careers in a scientific occupational environment, while artistic students would tend to choose a career in an artistic occupational environment.

Congruent males reported fewer attitudes associated with emotional disturbances and social alienation than the undecided or incongruent males. Congruent males also reported few symptoms of anxiety, whereas the undecided males reported themselves as being high-strung and tense.

In examining the sex variable, the females tended to be more trusting and affiliative in their interaction with others. Females also had stronger aesthetic and social interests. Males tended to be more analytical and logical in approaching situations and problems.

Overall the findings suggested that the undecided males had a tendency to feel tense, socially alienated, impulsive and distrustful in their person-environment relations. The congruent male tended to be more personally satisfied and have a more stable college major choice than did members of the other groups.

According to Lunneborg (1976) vocational indecision is a problem of college graduates as well as of undergraduates. This study compared vocationally undecided college graduates with decided college graduates. A survey was completed
three months following graduation to which 59\% of the graduating class responded. Fourteen percent of the baccalaureate recipients were undecided; they had no intended occupation. Of these 127 undecided graduates, 57 were females and 70 males. The distribution of college major areas for the undecided group indicated a slight, but significant, tendency for them to come from the humanities and the social sciences.

The survey used in this study asked for background information and open-ended comments. The results of the survey were statistically significant in grade point average indicating that the "undecideds" had a significantly lower grade point average than the decided group. This supports earlier hypotheses by the author (Lunneborg, 1975) suggesting that academic performance and precollege academic achievement were among the most reliable characteristics of the undecided group.

Lunneborg's (1976) literature further revealed that more students in the undecided group had completed all their undergraduate training at the university. They were not transfers from other colleges. Areas in which there were no statistical significance included the age the students started college, the time students selected a major, and paid employment. In fact, the undecideds had done more volunteer work.
In addition, this survey revealed that the undecided college graduate in a comparison with decided graduates enjoyed college less and did less well academically than the "decideds." The author suggested that undecided students were not motivated to study since they lacked vocational goals. In addition, they were not motivated to seek career-related activities in the future and it seemed that the lack of career orientation resulted in a less pleasant college experience.

In another study by Rose and Elton (1971), undecided college freshmen who persisted to graduation were compared with undecided freshmen who left the University of Kentucky by the end of their fourth quarter. Those that persisted had higher ACT scores than the leavers. At the time of their leaving, 72% of the departers were not in good academic standing and they had earned higher Nonconformity and Masculine Role scores. The high score on Nonconformity suggested a preoccupation with the self and social alienation. Scoring high in Masculine Role suggested a need for less exposure to aesthetic experiences and their potential effects upon stereotyped ideas of masculinity. From the study it was concluded that the undecideds were undergoing identity confusion.

Lunneborg (1975) studied college upperclassmen who were vocationally undecided. In a sample of 1622 students, 24% were found to be indecisive. Indecisive was defined as
being a college upperclassman and having no major. Results of the study indicated the grade point average and the credits earned were most predictive of the undecided group. Students who had declared no major had accumulated fewer college credit hours and had lower grades. High school grades and precollege test scores were the next most predictive factors. The undecideds, those who had not declared a major, had lower scores than the students who had declared a major. This study suggested that academic achievement is an important predictor of indecisiveness in upperclass high school and college students.

Vocational indecision was poorly related to the "Vocational Interest Inventory" and was unrelated to age and sex. The "Vocational Interest Inventory" produced scores in eight occupational areas according to Roe's (1956) system of classification. There was a weak indication that the educationally and vocationally undecideds were higher in Business Contact but lower in Outdoor Interests. The interest differentiation scores were negatively related to undecidedness in students.

Research (Goodale and Hall, 1976) seemed to indicate that there was a strong relationship between the father's occupational level and the college plans of high school boys. Male students' career plans were closely associated with the fathers' occupation. Girls, in this study, appeared to be less affected by parents' interest and background than
that perceived by boys. Girls appeared to be more independent in formulating their career plans and seemed less likely than boys to inherit the career aspirations of parents.

Results of the study indicate that the student's perception of parental interest in student's school work and the parents' hopes that their offspring will attend college were positive influences on the student's career aspirations. Parental involvement and parental pressure did not appear to be related to student plans. From the study, it would seem that a home atmosphere of high interest and parental nondirective support would be an effective influence on children's career plans.

Slavey (1980) conducted a study of 232 college students using a number of scales and inventories with the "Occupational Alternative Question." This question consisted of two parts and the students were divided into groups based on their responses to the question. The first part of the question asked the student to list all the occupations they were presently considering. The second part of the question asked the student which occupation was his first choice and if he were undecided he should write undecided.

Results of the study indicated that socioeconomic status was not related to degrees of decidedness and that the father's education was not related to vocational decidedness. The sex differences that occurred indicated
that men were less congruent than women with their college majors. The group differences suggested that students having a first choice regardless of whether it was accompanied by alternatives, did differentiate subjects. Subjects who did not have an expressed first choice were unsure of their college major and their career choice while subjects with a first choice indicated that they were satisfied and had few doubts.

Attempts to comprehend the educational and vocational indecisiveness of some students and the decisiveness of other students were characterized by confusing facts, figures and findings. Just as there are many approaches attempting to assess the variables which might account for undecidedness and decidedness, there are also many theoretical perspectives on career orientation.

**Theories**

Ginzberg, Ginzburg, Axelrad and Herma (1951) viewed the career choice process as being defined by life stages. They theorized that occupational choice is a developmental process and have labeled the developmental stages as fantasy, tentative, and realistic. The tentative period, ages 11 to 17, was divided into the substages of interest, capacity, value and transition. The realistic period, 17 years of age and beyond, was composed of exploration and crystallization substages.
It was Super (1957) who focused on the close relationship between career development and personal development. In this theory, the process of career development was primarily the development of the self-concept. The student was seen as choosing life styles and occupations which would allow him to function in a role consistent with his self-concept.

Super's approach, like Ginzberg's, stressed the importance of career development tasks. The continuous life stages identified by Super include growth, exploration, establishment, maintenance, and decline. These stages were then divided further into substages. The exploratory stage (adolescence), included the substages of tentative, transition and trial; the establishment (young adulthood) included trial, stabilization and advancement substages. An important developmental task of the adolescent exploratory stage would include crystallizing a vocational preference; while in the young adult establishment stage, the individual would implement and stabilize in the chosen vocation.

Super (1957) viewed vocational decision making as a lifelong developmental process and specified tasks for each stage as the individual accomplished vocational maturity.

Tiedeman and O'Hara (1963) have also advocated stages in the development of vocational behavior, namely, anticipation, implementation, and adjustment. The substages of anticipation include exploration, crystallization, choice
and clarification. Implementation includes the substages of social induction, reformation, and integration. This theory was characterized by the interplay between personality development and occupational concerns. This approach would advocate that the schools provide a wide range of activities and programs that would enable the students to achieve an identity, to develop decision-making skills and to test available alternatives.

More recent adult developmental theories include Sheehy (1976) and Levinson (1978) who have emphasized the great developmental timetable. They suggested that whatever peoples' special life experiences were, they passed through the same sequence of developmental stages and they must meet the developmental tasks which would be appropriate to each stage. The authors suggested that individuals continued to change throughout their lifetimes according to an age related timetable.

By emphasizing development, these approaches suggested that since vocational choice appeared to be a developmental process, everyone should not be expected to reach the same place at the same time.

Roe's (1956) theory does not emphasize the developmental approach but rather she has emphasized the effect of the child's early experiences on his later decision making styles and his vocational preference. Roe also emphasized needs as unconscious motivators of vocational behavior.
Like Roe, Holland (1966) had classified level hierarchies within occupational environments. He had classified work environments into six categories which corresponded to six personality types: realistic, investigative, social, conventional, enterprising and artistic. Holland contended that the personal orientation of an individual caused him to gravitate toward an environmental setting that was congruent with his personality.

In summarizing, it was noted that there was an abundance of literature that has been published in the past half century regarding the educationally and vocationally undecided students. Results of the research are conflicting and have indicated few statistically significant differences between the undecided and the decided students even though the list of variables studied seem to be extensive and all encompassing (Gordon, 1981).
CHAPTER III

METHODS OF STUDY

Introduction

The primary focus of this study was to investigate the influence of some personality and demographic factors that might differentiate the educationally and vocationally undecided students from the educationally and vocationally decided students. This chapter presents the setting for the study, the sample, and the methods for data collection and analysis.

Setting

The study was conducted on The Ohio State University Columbus campus during Spring Quarter, 1981. The Ohio State University, a major comprehensive University in the state of Ohio, has an enrollment of approximately 50,000 students. Within the University there are seventeen colleges, nine schools and the Graduate School. One hundred eighty-one undergraduate major programs are offered and more than 6,900 courses are scheduled at the University.

The subjects for this study were two groups of students from the Department of Education: Special Services. The undecided subjects were students who had enrolled in the Seminar in Career Development during Spring Quarter, 1981. The decided subjects were students who had enrolled in the
Seminar in Exploring Helping Relationships during Spring Quarter, 1981.

Sample

The subjects who participated in this study were two hundred randomly selected students who were enrolled during the Spring Quarter in Education: Special Services 270 and Education: Special Services, 271. Randomization was achieved by alphabetically listing the names of the seminar leaders in each group with the total number of students in each seminar. Beginning with the second leader, every second seminar section was chosen until the total number of students in each group totaled at least 115. Not all students were present when the seminar leader presented the research material. As a result, the numbers in the two groups vary.

One hundred five students were randomly selected from Education: Special Services, 270, the Seminar in Career Development; the three hour elective course offered by the College of Education through the Counseling and Consultation Services. This course was offered to students as a seminar for examining the self in relation to educational and vocational goals. The focus of this seminar was on self-assessment, decision making styles, introduction to vocational information, employability and work adjustment skills. The students who were enrolled in this course were basically undecided regarding the choice of a college major and undecided regarding their vocational preferences.
Ninety-five students were randomly selected from Education: Special Services 271, the Seminar in Exploring Helping Relationships, which is the course for students who wished to explore the field of helping relationships. The students who were enrolled in this course were interested in examining the field of helping relationships and were using the field experience to try on the helping relationship role. The students who were enrolled in this course had tentatively decided on their college major and had tentatively decided on their vocational preference.

Staff coordinators and group facilitators were contacted and permission was obtained to present information in a facilitator's meeting to inform the leaders of the general purpose of the study. Students were then informed of the general purpose of the research through their seminar leaders.

Data concerning the personal characteristics of the subjects were obtained from both the undecided and the decided groups late in Spring Quarter. The Personality Research Form (PRF) was administered to the students in Education: Special Services 271, as a part of the regular curriculum in the early part of Spring Quarter. The PRF was administered to the undecided group in a regular class period, by the group facilitators in the latter part of Spring Quarter.
Methods of Data Collection

The data for this study were the results obtained from the Personality Research Form and the information obtained from the Career Planning Information Form. The group facilitators presented the instruments to the students.

The two groups who participated in the study met one day a week on campus in a small meeting room or classroom. The Career Planning Information Form was administered to both groups by the group facilitators late in Spring Quarter. The tentatively decided group had already taken the Personality Research Form earlier in the quarter. For the undecided group the group facilitators administered the PRF and the information form at the same time during a class session late in Spring Quarter, 1981.

Instruments

The Personality Research Form, developed by Jackson and published by the Research Psychologist Press in 1967, was used to assess the personality traits of the two groups of educationally and vocationally undecided and decided students. The PRF assessed twenty personality traits and had two validity scales, an Infrequency Scale and a Desirability Scale. Like other personality instruments, the PRF used Murray's personality theory and adapted twenty trait terms of personality variables from Murray's list of needs.
The PRF was statistically well designed and was developed by Jackson with special attention to psychometric detail. It was a technically sophisticated inventory and reflected advances in test construction that would have been practically impossible before the development of the computer. Anastasi (1976) referred to the PRF as truly outstanding among personality inventories.

Test construction for the PRF began by careful examination of modern principles of personality and careful examination of test theories. As a result, this instrument provided a concise, convenient format with substantial reliability and validity. Retest reliabilities in college samples ranged from .50 to .89. Data on the validity of the PRF were meager but had yielded promising results.

This test was available in five forms and in this study Form AA was used which consisted of 410 items. This form required about sixty minutes to administer. All tests were hand scored. This was a relatively simple procedure using a scoring template. The scorer tallied the number of X's in the two vertical columns which corresponded to each scale which was abbreviated in the space at the bottom of the vertical columns.

The other instrument which was used in the study was the Career Planning Information Form (see Appendix A). This instrument was devised in order to obtain the demographic data needed to conduct the discriminant analysis.
Demographic information obtained on the personal data sheet asked the students to report age, sex, race, university status, employment, grade point average, occupation of father and mother and family income.

Race was divided into the categories of Black, Caucasian and other. The current university status was limited to the four levels of freshman, sophomore, junior, and senior. Grade point average also consisted of four levels with the range being 1.0-1.9, 2.0-2.9, 3.0-3.4, and 3.5-4.0. The occupations of father and mother were divided into six levels consisting of higher professional, professional, semi-professional, skilled, semi-skilled, and unskilled. The approximate family income was divided into five levels which ranked as follows: above $30,000, $25,000-$30,000, $16,000-$24,000, $10,000-$15,000 and below $10,000.

Much more personal data might have been obtained but this study was limited to an examination of these nine demographic variables. The personality and demographic variables measured are listed in Table 2.

**Analysis**

In this study a two-group discriminant function analysis was conducted to determine if the variables measured could be classified with either of the two groups of students. Thirty-one predictor variables were tested to determine whether the educationally and vocationally
TABLE 2
INDEPENDENT VARIABLES MEASURED

<table>
<thead>
<tr>
<th>Personality Characteristics</th>
<th>Demographic Data</th>
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<tbody>
<tr>
<td>Abasement</td>
<td>Group</td>
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<tr>
<td>Achievement</td>
<td>Age</td>
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<tr>
<td>Affiliation</td>
<td>Sex</td>
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<tr>
<td>Aggression</td>
<td>Race</td>
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<tr>
<td>Autonomy</td>
<td>Current university status</td>
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<tr>
<td>Change</td>
<td>Currently employed</td>
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<tr>
<td>Cognitive Structure</td>
<td>Grade point average</td>
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<tr>
<td>Defendence</td>
<td>Occupation of father and mother</td>
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<tr>
<td>Dominance</td>
<td>Approximate family income</td>
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<td>Endurance</td>
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<td>Exhibition</td>
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<td>Harmavoidance</td>
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<td>Sentience</td>
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<td>Social Recognition</td>
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<td>Desirability</td>
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<td>Infrequency</td>
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</table>

Undecided students could be differentiated from the educationally and vocationally decided students. The discriminant analysis calculated the effects of the thirty-one independent variables on the two groups of students and statistically distinguished between the two groups of subjects. The mathematical objective of the discriminant analysis was to linearly combine and weigh the thirty-one discriminant variables so that the groups were as statistically distinct as possible. This process of computation identified the variables which contributed most to
the differentiation of the respective groups.

The discriminant analysis subprogram of the Statistical Package for Social Science was used to measure the variables as they related to the two groups of students. The two-group discriminant function analysis using a stepwise inclusion procedure, based on the criterion of minimizing Wilks' lambda, yielded the discriminant functions which discriminated the observed two groups. By taking the thirty-one variables and mathematically combining them, the variables characteristic of the undecided group were clustered at one end and the variables characteristic of the decided group at the other.

The discriminant analysis distinguished between the two groups by forming linear combinations of the discriminating variables. The discriminate formula used was

\[ D_i = d_{i1}Z_1 + d_{i2}Z_2 + \ldots + d_{ip}Z_p \]

where \( D_i \) was the score on discriminant function \( i \), the \( d \)'s were weighing coefficients, and the \( Z \)'s were the standardized values of the \( p \) discriminating variables which were used in the analysis.

The findings of this study are presented in Chapter IV.
CHAPTER IV

FINDINGS

This chapter presents the findings of the study. The chapter is divided into two sections. Section one presents descriptive statistics for criteria by groups. Section two presents results of the discriminant analysis which indicate the personality and demographic variables which seem to differentiate the undecided from the decided students.

Descriptive Statistics

A discriminant analysis was used in this descriptive study to distinguish between the two groups of students. The independent variables were analyzed to determine whether or not a difference existed between the two groups of students. The discriminant analysis was used to extract from the data a combination of variables that would maximally distinguish between the two groups. The discriminant analysis subprogram of the Statistical Package for Social Science was used to measure the variables as they related to the two groups of students.

In the statistical program the mean scores and the standard deviations were computed for each group on a univariate scale. Table 3 (pp. 41-43) lists the descriptive
statistics for the personality variables by groups. The mean score and the standard deviation for each of the personality variables were listed for the undecided and decided groups.

The mean scores for the twenty-two variables on the Personality Research Form indicated that the undecided students had a higher mean score on eight variables and the decided students had a higher mean score on fourteen variables. Table 4 (p. 44) lists the twenty-two variables with the group having the higher mean score. However, only those variables marked with an asterisk were statistically significant between groups.

Nine of the personality variables did not reveal statistically significant differences between the two groups. Thirteen of the personality variables on a univariate scale showed a statistically significant difference. The four variables that were characteristic of the undecided group were aggression, autonomy, defendence and impulsivity. The nine traits which were higher ranking for the decided group were abasement, affiliation, cognitive structure, harmavoidance, nurturance, order, sentenience, succorance and the infrequency scale.

Variables which did not show a statistically significant difference between the two groups on a univariate analysis were change, dominance, exhibition, play, achievement, endurance, social recognition, understanding and desirability.
<table>
<thead>
<tr>
<th>Group</th>
<th>Abasement</th>
<th>Achievement</th>
<th>Affiliation</th>
<th>Aggression</th>
<th>Autonomy</th>
<th>Change</th>
<th>Cognitive Structure</th>
<th>Defendence</th>
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<td>12.80 (3.38)</td>
<td>16.04 (2.90)</td>
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<td>7.69 (3.31)</td>
<td>11.12 (3.24)</td>
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<td>5.61 (3.10)</td>
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<td>Endurance</td>
<td>Exhibition</td>
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<td>17.39</td>
<td>12.06</td>
<td>11.93</td>
<td>11.65</td>
<td>1.42</td>
<td>17.62</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2.71)</td>
<td>(9.02)</td>
<td>(6.24)</td>
<td>(3.71)</td>
<td>(5.91)</td>
<td>(6.09)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 4

UNIVARIATE F-RATIO BETWEEN UNDECIDED AND DECIDED GROUPS FOR INDEPENDENT PERSONALITY VARIABLES

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group**</th>
<th>Having Larger Mean</th>
<th>F(1, 198)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Abasement</td>
<td>D</td>
<td></td>
<td>8.836</td>
<td>.003</td>
</tr>
<tr>
<td>Achievement</td>
<td>D</td>
<td></td>
<td>.556</td>
<td>.457</td>
</tr>
<tr>
<td>*Affiliation</td>
<td>D</td>
<td></td>
<td>4.602</td>
<td>.033</td>
</tr>
<tr>
<td>*Aggression</td>
<td>U</td>
<td></td>
<td>18.47</td>
<td>.000</td>
</tr>
<tr>
<td>*Autonomy</td>
<td>U</td>
<td></td>
<td>7.99</td>
<td>.005</td>
</tr>
<tr>
<td>Change</td>
<td>U</td>
<td></td>
<td>.327</td>
<td>.567</td>
</tr>
<tr>
<td>*Cognitive Structure</td>
<td>D</td>
<td></td>
<td>7.939</td>
<td>.005</td>
</tr>
<tr>
<td>*Defendence</td>
<td>U</td>
<td></td>
<td>12.00</td>
<td>.000</td>
</tr>
<tr>
<td>Dominance</td>
<td>U</td>
<td></td>
<td>.132</td>
<td>.717</td>
</tr>
<tr>
<td>Endurance</td>
<td>D</td>
<td></td>
<td>3.197</td>
<td>.075</td>
</tr>
<tr>
<td>Exhibition</td>
<td>U</td>
<td></td>
<td>.000</td>
<td>.993</td>
</tr>
<tr>
<td>*Harmavoidance</td>
<td>D</td>
<td></td>
<td>5.558</td>
<td>.019</td>
</tr>
<tr>
<td>*Impulsivity</td>
<td>U</td>
<td></td>
<td>5.296</td>
<td>.022</td>
</tr>
<tr>
<td>*Nurturance</td>
<td>D</td>
<td></td>
<td>15.97</td>
<td>.000</td>
</tr>
<tr>
<td>*Order</td>
<td>D</td>
<td></td>
<td>4.492</td>
<td>.035</td>
</tr>
<tr>
<td>Play</td>
<td>U</td>
<td></td>
<td>.143</td>
<td>.706</td>
</tr>
<tr>
<td>*Sentience</td>
<td>D</td>
<td></td>
<td>10.08</td>
<td>.002</td>
</tr>
<tr>
<td>Social Recognition</td>
<td>D</td>
<td></td>
<td>.021</td>
<td>.884</td>
</tr>
<tr>
<td>*Succorance</td>
<td>D</td>
<td></td>
<td>4.885</td>
<td>.028</td>
</tr>
<tr>
<td>Understanding</td>
<td>D</td>
<td></td>
<td>.740</td>
<td>.390</td>
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<tr>
<td>Desirability</td>
<td>D</td>
<td></td>
<td>.478</td>
<td>.490</td>
</tr>
<tr>
<td>*Infrequency</td>
<td>D</td>
<td></td>
<td>12.13</td>
<td>.001</td>
</tr>
</tbody>
</table>

* = Statistically Significant
** U = Undecided
    D = Decided
Table 5 charts the two groups on opposing scales on the Personality Research Form. Statistical data on a univariate scale indicated directional differences in the variables listed.

**TABLE 5**

VARIABLES BY GROUPS ON OPPOSING SCALES OF THE PERSONALITY RESEARCH FORM

<table>
<thead>
<tr>
<th>Description of Scale</th>
<th>Undecided</th>
<th>Decided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure of Impulse Expression and Control</td>
<td>Impulsivity</td>
<td>Harmavoidance</td>
</tr>
<tr>
<td></td>
<td>Change</td>
<td>Order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cognitive Structure</td>
</tr>
<tr>
<td>Measures of Orientation towards Direction from Other People</td>
<td>Autonomy</td>
<td>Succorance</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measures of Degree and Quality of Interpersonal Orientation</td>
<td>Aggression</td>
<td>Affiliation</td>
</tr>
<tr>
<td></td>
<td>Defendence</td>
<td>Nurturance</td>
</tr>
</tbody>
</table>

An analysis of the demographic data for the undecided and decided groups is given by percentages in Table 6. The four demographic factors which indicated significant directional differences based on mean scores were age, sex, university status and grade point average. The descriptive statistics suggested that the undecided group tended to be older, have more male students and have more upperclassmen. The undecided group also had a lower grade point average.
TABLE 6

DEMOGRAPHIC INFORMATION OF GROUPS BY PERCENT

<table>
<thead>
<tr>
<th>Variables</th>
<th>Undecided</th>
<th>Decided</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-19</td>
<td>44.7</td>
<td>67.4</td>
<td>55.5</td>
</tr>
<tr>
<td>20-21</td>
<td>45.7</td>
<td>26.3</td>
<td>36.5</td>
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<tr>
<td>22-25</td>
<td>7.6</td>
<td>4.3</td>
<td>6.0</td>
</tr>
<tr>
<td>26-37</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>54.3</td>
<td>88.4</td>
<td>70.5</td>
</tr>
<tr>
<td>Male</td>
<td>45.7</td>
<td>11.6</td>
<td>29.5</td>
</tr>
<tr>
<td><strong>Race</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>10.5</td>
<td>5.3</td>
<td>8.0</td>
</tr>
<tr>
<td>Caucasian</td>
<td>89.5</td>
<td>94.7</td>
<td>92.0</td>
</tr>
<tr>
<td><strong>University Status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>29.5</td>
<td>63.2</td>
<td>45.5</td>
</tr>
<tr>
<td>Sophomore</td>
<td>53.3</td>
<td>31.6</td>
<td>43.0</td>
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<tr>
<td>Junior</td>
<td>10.5</td>
<td>5.2</td>
<td>8.0</td>
</tr>
<tr>
<td>Senior</td>
<td>6.7</td>
<td>0.0</td>
<td>3.5</td>
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<tr>
<td><strong>Employed</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>48.6</td>
<td>38.9</td>
<td>44.0</td>
</tr>
<tr>
<td>No</td>
<td>51.4</td>
<td>61.1</td>
<td>56.0</td>
</tr>
<tr>
<td><strong>Grade Point Average</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.5-4.0</td>
<td>4.8</td>
<td>10.5</td>
<td>7.5</td>
</tr>
<tr>
<td>3.0-3.4</td>
<td>19.0</td>
<td>29.5</td>
<td>24.0</td>
</tr>
<tr>
<td>2.0-2.9</td>
<td>69.5</td>
<td>56.8</td>
<td>63.5</td>
</tr>
<tr>
<td>1.0-1.9</td>
<td>6.7</td>
<td>3.2</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Father's Occupation</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher Professional</td>
<td>6.7</td>
<td>5.3</td>
<td>6.0</td>
</tr>
<tr>
<td>Professional</td>
<td>20.0</td>
<td>14.7</td>
<td>17.5</td>
</tr>
<tr>
<td>Semi-Professional</td>
<td>14.3</td>
<td>22.1</td>
<td>18.0</td>
</tr>
<tr>
<td>Skilled</td>
<td>34.3</td>
<td>24.2</td>
<td>29.5</td>
</tr>
<tr>
<td>Semi-skilled</td>
<td>6.7</td>
<td>13.7</td>
<td>10.0</td>
</tr>
<tr>
<td>Unskilled</td>
<td>18.1</td>
<td>20.0</td>
<td>19.0</td>
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</tbody>
</table>
TABLE 6 (Continued)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Undecided</th>
<th>Decided</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>*Mother's Occupation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Higher Professional</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Professional</td>
<td>13.3</td>
<td>12.6</td>
<td>13.0</td>
</tr>
<tr>
<td>Semi-Professional</td>
<td>3.8</td>
<td>2.1</td>
<td>3.0</td>
</tr>
<tr>
<td>Skilled</td>
<td>5.7</td>
<td>11.6</td>
<td>8.5</td>
</tr>
<tr>
<td>Semi-skilled</td>
<td>6.7</td>
<td>7.4</td>
<td>7.0</td>
</tr>
<tr>
<td>Unskilled</td>
<td>70.5</td>
<td>66.3</td>
<td>68.5</td>
</tr>
</tbody>
</table>

Income

<table>
<thead>
<tr>
<th>Income</th>
<th>Undecided</th>
<th>Decided</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Above $30,000</td>
<td>54.3</td>
<td>48.4</td>
<td>51.5</td>
</tr>
<tr>
<td>$25,000-$30,000</td>
<td>15.2</td>
<td>25.3</td>
<td>20.0</td>
</tr>
<tr>
<td>$16,000-$24,000</td>
<td>21.0</td>
<td>16.8</td>
<td>19.0</td>
</tr>
<tr>
<td>$10,000-$15,000</td>
<td>3.8</td>
<td>2.1</td>
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</tr>
<tr>
<td>Below $10,000</td>
<td>5.7</td>
<td>7.4</td>
<td>6.5</td>
</tr>
</tbody>
</table>

* = Statistically Significant

**Discriminant Analysis**

The standardized canonical discriminant function coefficients indicated that eighteen of the thirty-one variables were influential in discriminating between the two groups. The results indicated that there were nine variables which seemed to be characteristic of each group of students. The undecided students tended to rank higher in achievement, defendence, impulsivity, order, social recognition and succorance. This group also tended to have more male students, more upperclassmen, and had a lower grade point average.

For the tentatively decided group, the results of the discriminant analysis indicated that the variables
characteristic of the group were abasement, cognitive structure, endurance, exhibition, harmavoidance, nurturance, sentience and the infrequency scale. The mothers of this group tended to be more skilled. The standardized weights resulting from the discriminant analysis are listed in Table 7.

Now that this set of eighteen variables had been found which provided discrimination for the subjects in the two groups, a set of classification functions could be obtained which allowed the classification of new cases with unknown group membership. Knowing the characteristics that did well in predicting undecided and decided students, those characteristics could then be used to predict group membership based on raw scores. Thirty-nine percent of the variance in Y, which is the ability to predict group membership, is accounted for by this discriminating function using the eighteen variables in Table 7. The equation of discriminate function coefficient Y is:

\[ Y = 0.298 \text{(Sex)} - 0.452 \text{(University Status)} - 0.181 \text{(Grade Point Average)} + 0.129 \text{(Mother's Occupation)} + 0.264 \text{(Abasement)} - 0.215 \text{(Achievement)} + 0.405 \text{(Cognitive Structure)} - 0.185 \text{(Defendence)} + 0.208 \text{(Endurance)} + 0.277 \text{(Exhibition)} + 0.352 \text{(Harmavoidance)} - 0.271 \text{(Impulsivity)} + 0.484 \text{(Nurturance)} - 0.403 \text{(Order)} + 0.278 \text{(Sentience)} - 0.381 \text{(Social Recognition)} - 0.314 \text{(Succorance)} + 0.390 \text{(Infrequency)} \]
### TABLE 7

STANDARDIZED WEIGHTS RESULTING FROM THE DISCRIMINANT ANALYSIS OF TWENTY-TWO PERSONALITY AND NINE DEMOGRAPHIC VARIABLES.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Standardized Discriminant Analysis Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>-.298</td>
</tr>
<tr>
<td>University Status</td>
<td>-.452</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>-.181</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>.129</td>
</tr>
<tr>
<td>Abasement</td>
<td>.264</td>
</tr>
<tr>
<td>Achievement</td>
<td>-.215</td>
</tr>
<tr>
<td>Cognitive Structure</td>
<td>.405</td>
</tr>
<tr>
<td>Defendence</td>
<td>-.185</td>
</tr>
<tr>
<td>Endurance</td>
<td>.208</td>
</tr>
<tr>
<td>Exhibition</td>
<td>.277</td>
</tr>
<tr>
<td>Harmavoidance</td>
<td>.352</td>
</tr>
<tr>
<td>Impulsivity</td>
<td>-.271</td>
</tr>
<tr>
<td>Nurturance</td>
<td>.484</td>
</tr>
<tr>
<td>Order</td>
<td>-.403</td>
</tr>
<tr>
<td>Sentience</td>
<td>.278</td>
</tr>
<tr>
<td>Social Recognition</td>
<td>-.381</td>
</tr>
<tr>
<td>Succorance</td>
<td>-.314</td>
</tr>
<tr>
<td>Infrequency</td>
<td>.390</td>
</tr>
</tbody>
</table>

Wilks' Lambda = .604, Chi Squared = 95.37, D.F. = 18, p < .001, R = .63, R² = .39
Using the discriminant analysis function, raw data for every subject were entered into that equation, resulting in a new prediction of group membership. Therefore, based on the raw data for each person and knowing the true membership a comparison could be made comparing actual group membership versus predicted group membership.

If the subject were originally in the undecided group (Group I) and the equation predicted the subject in the undecided group, then there was a match; if the subject were actually in the decided group (Group 2) and the subject was predicted in Group 2 based on the equation there was another match. All others were mismatches, i.e., a subject from Group 1, but predicted in Group 2, based on the equation would constitute a mismatch. Likewise, an actual Group 2, predicted as a Group 1 would constitute a mismatch. Data revealed that 80% of the cases had been correctly matched using this equation (see Table 8).

The group centroids based on the eighteen variables in the discriminant function were calculated to be -.767 for the undecided group and .847 for the decided group. Therefore, this program classified any individual having a negative predicted discriminant score as being a member of the undecided group and any individual having a positive predicted discriminant score as being a member of the decided group. It should be noted that the selection of one group over another to be designated as having a positive
TABLE 8
NUMBER AND PERCENT OF GROUPED CASES CORRECTLY CLASSIFIED BY THE DISCRIMINANT FUNCTION USING EIGHTEEN INDEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>Actual Group</th>
<th>Number of Cases</th>
<th>Predicted Group Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Group 1</td>
<td>105</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>76.2%</td>
</tr>
<tr>
<td>Group 2</td>
<td>95</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16.8%</td>
</tr>
</tbody>
</table>

Percent of "Grouped" Cases Correctly Classified: 79.50%.

or negative centroid is arbitrary. The selection was made such that the positive centroid was assigned to that group having the most variables associated in a positive direction with that group.

As shown in Table 9, discriminant scores for individuals were plotted to reflect the separation of groups, using the discriminant analysis function to predict group memberships. The obvious overlap between these two groups indicated the potential misclassification using the discriminant analysis function as a prediction equation.

This, then, would indicate that from the eighteen variables selected by the discriminant analysis, group membership could be predicted with 80% accuracy by using the raw scores of new cases with unknown group membership. This was a classification technique which was possible after the initial computation of the discriminant analysis. It was a check of the adequacy of the discriminant functions.
TABLE 9

GROUPS STACKED HISTOGRAM OF PREDICTED SCORES
FROM THE DISCRIMINANT FUNCTION

<table>
<thead>
<tr>
<th>GROUP CENTDAYS</th>
<th>-3</th>
<th>-2</th>
<th>-1</th>
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<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2</td>
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<tr>
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CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter is divided into three sections. The first section presents a summary of the research project. The second section discusses conclusions drawn from the study, and the third section presents recommendations for further study.

Summary

This section summarizes the research problem, the procedures employed in data collection and analyses, and the findings.

This study was an investigation to determine if there were differences in the personality traits and the demographic factors of the educationally and vocationally undecided and decided students.

The two groups of students involved in the study were students who had enrolled in Education: Special Services 270 and 271. Students who were designated as educationally and vocationally undecided were those students who had enrolled in Education: Special Services, 270. This Seminar in Career Development, was an elective course designated to help students examine the self in relation to educational
and career goals. The focus of the course was on self-assessment, decision making identification, occupation information and work adjustment skills.

The other group of subjects were those students who had enrolled in Education: Special Services, 271, the Seminar in Exploring Helping Relationships. This seminar was designed for examining a field experience in helping relationships. The focus of the course was on self-development, decision making and practical experience in the world of work for students who wished to explore a career through placement in educational and community agency settings. By and large, students enrolled in this course have tentatively decided on an educational and vocational direction at this point in time.

From these two groups, 200 students were randomly selected. There were 105 in the educationally and vocationally undecided group and 95 in the decided group.

The data collected for this study were the results obtained from the Personality Research Form (PRF) and the data obtained from the Career Planning Information Form. The PRF assessed twenty personality traits and had two validity scales. The information Form was designed in order to obtain demographic information in nine areas.

These instruments were administered to both groups of students during Spring Quarter 1981. The decided group had taken the personality inventory early in the quarter and the
undecided group took the PRF late in Spring Quarter. The demographic information was obtained from both groups late in Spring Quarter. The inventories and questionnaires were administered by the seminar leaders.

In this study a two-group discriminant analysis was conducted to statistically distinguish between the two groups. The Subprogram Discriminant of the Statistical Package for Social Science was used. To distinguish between the groups, thirty-one independent variables were selected which measured characteristics on which the groups might be expected to differ.

The mathematical objective of the discriminant analysis was to weigh and linearly combine the discriminating variables so that the groups were as statistically distinct as possible. In this study a discriminant analysis was utilized to determine whether educationally and vocationally undecided students who were enrolled in Education: Special Services 270 could be differentiated from those tentatively decided students who had enrolled in Education: Special Services 271.

The findings revealed that on the Personality Research Form the undecided students had a higher mean score on seven variables and the decided group had a higher mean score on fifteen variables (see Table 3, p. 41). Some of the scores, however, were so close that the results were not statistically significant. The variables that were statistically significant on a univariate scale of discrimination were aggression,
autonomy, defendence and impulsivity for the undecided students. The decided students ranked significantly higher in abasement, affiliation, cognitive structure, harmavoidance, nurturance, order, sentience, succorance and the infrequency scale. Variables which did not reveal a statistically significant difference between the two groups were achievement, change, dominance, endurance, exhibition, play, social recognition, understanding and the desirability scale.

A high aggression score for the undecided student indicated that the student was easily annoyed, irritable, antagonistic, revengeful and easily-angered. Scoring high in autonomy indicated that the student might want to break away from restraints, confinements and restrictions and would enjoy being unattached and free. The scale indicated that a high scorer in autonomy does not want to be tied to people, places or obligations and might be rebellious when confronted with restraints. Some defining trait adjectives of autonomous persons might be free, independent, individualistic, non-conforming, and resistant.

Ranking high in defendence would indicate that the undecided student was ready to defend himself; would take offense easily, was defensive, resisted inquiries, was self-excusing and rationalizing.

Another area where the undecideds ranked high was impulsivity. This score would indicate that the undecided student tended to act without deliberation, might be
uninhibited, spontaneous and impulsive. Thus, the characteristics of the undecided group seemed to indicate aggressiveness, defensiveness, impulsiveness and autonomy. However, how these characteristics are specifically related to career decision making is speculative, for it is difficult to distinguish between cause and effect.

The tentatively decided group on a univariate scale ranked statistically significantly higher than the undecided group in the following nine areas: abasement, affiliation, cognitive structure, harmavoidance, nurturance, order, sentience, succorance and the infrequency scale.

Ranking high in abasement would indicate that the decided subjects showed a high degree of humility, were obedient, surrendering, yielding and resigned. A high score in affiliation would suggest that these students enjoyed being with people and that they were amicable, cooperative, sociable and friendly.

Scoring high in cognitive structure would indicate that the decided students did not like ambiguity or uncertainty and that they liked to make decisions based upon definite knowledge. These students might be defined as seeking certainty, being definite, accurate, precise and needing structure.

A high score in harmavoidance suggested that the decided students sought to maximize personal safety. They would tend to be cautious, avoid risks, seek safety and be
precautionary. Nurturance seemed to be another characteristic of the decided group. They tended to want to assist others whenever possible and readily perform favors for others. Adjectives describing these students would be sympathetic, benevolent, protective, ministering, charitable and assisting.

Ranking high in order suggested that the decided students disliked clutter, confusion and lack of organization. These students would be interested in keeping materials methodically organized. They would be systematic, methodical, scheduled, unvarying and deliberate.

A high sentience score indicated that the students were sensitive to many forms of experiences. They would tend to be sensitive to sights, sounds and the way things feel. These students would be observant, sensitive, perceptive, discriminating and responsive.

Scoring high in succorance indicated that the students sought protection, advice and reassurances of other people. These students would be trusting, wanting advice, dependent and help-seeking.

The decided group also ranked high on the infrequency scale which suggested that some students responded in a random manner which might be due to carelessness, poor comprehension or confusion.

On the PRF's opposing group scales, the undecideds and the decideds were in opposition in measures of impulse
expression and control, in measures of orientation toward direction from other people, and in measures of degree and quality of interpersonal orientation.

In measures of impulse expression and control the undecided students ranked high in impulsivity indicating that they tended to act spontaneously and without deliberation. It suggested that the undecided students gave vent readily to their feelings and wishes and might be impulsive, excitable and impetuous. On the opposing scale of measures of impulse expression and control the decided students ranked high in harmavoidance, order and cognitive structure. This would indicate that they were more careful, cautious, unadventurous, disciplined, consistent, and would make decisions based upon definite knowledge.

The groups were also on opposing sides of the scale in measures of orientation toward direction from other people. The undecideds were high in autonomy, while the decideds ranked high in succorance. The undecideds would appear to enjoy being unattached, not tied to people, places or obligations. They did not appear to want restrictions or confinements but apparently wanted to be free, individualistic and non-conforming. On the other hand, the decideds ranking higher in succorance sought reassurances from other people, wanted support and were dependent on other people.

There also appeared to be a directional difference in the two groups in measures of degree and quality of
interpersonal orientation. The undecides ranked higher in aggression and defendence, while the decideds ranked higher in affiliation and nurturance. This would indicate that the undecides were antagonistic, easily angered, hostile, defensive, protesting and self-excusing. The decideds, on the other hand, could be classified as loyal, friendly, cooperative, sympathetic, caring, supporting and charitable.

The four demographic factors which indicated statistically significant scores were age, sex, university status and grade point average (see Table 6, 46). An analysis of the demographic factors indicated that the undecided group was older than the decided group. The greatest percentage of undecides were sophomores and the greatest percentage of decideds were freshmen. There were also more juniors and seniors in the undecided group.

There were more females than males in both groups but a significantly larger number of females were in the decided group. Both groups were predominately Caucasian but there were almost twice as many Blacks in the undecided group. Blacks accounted for 10 1/2% of the undecided group.

Fewer than half in both groups were unemployed but more undecided students were employed than decided students.

There was a large differentiation between the groups in grade point average. More than twice as many decided students had a 3.5-4.0 and 10% more decided than undecided students were in the 3.0-3.5 grade point range. More than
twice as many undecided students had a 1.0-1.9 grade point average and about 13% of the undecided group had a 2.0-2.9. The undecided group had a significantly lower grade point average than the decided group.

There seemed to be little difference in occupations of the fathers and the mothers for both groups. Both groups had about 40% of the fathers in the professional range. The greatest percentage of mothers were in the unskilled range, but the decided students' mothers tended to be more skilled.

The students surveyed reported about 70% of the family income above $25,000 with the decided group having a slightly higher percentage than the undecided group. Both the undecided and decided groups reported 9.5% of the family income below $15,000. There seemed to be little difference in family income between the two groups.

The purpose of the discriminant analysis was to weigh and linearly combine the discriminating functions in order to differentiate between the two groups. The results indicated that there were nine variables which seemed to be characteristic of each group of students. The results of the discriminant analysis equation, using the personality variables, indicated that the undecided group tended to rank higher in achievement, defendence, impulsivity, order, social recognition and succorance.
In achievement and social recognition the mean scores were very close for both groups. Succorance and order were more difficult to explain. The mean scores were higher for the decided group but the directional difference in the discriminant analysis was toward the undecided group (see Table 10). This is an artifact of group variance. The variables may have been interacting with something else. It is probably due to a variance. Perhaps the analysis was able to compute the needs of the students.

**TABLE 10**

**PERSONALITY CHARACTERISTICS OF THE GROUPS USING THE DIRECTIONAL MEAN SCORES AND THE RESULTS OF THE DISCRIMINANT ANALYSIS**

<table>
<thead>
<tr>
<th>Measures</th>
<th>Undecided</th>
<th>Decided</th>
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</thead>
<tbody>
<tr>
<td>Mean Scores</td>
<td>Aggression</td>
<td>Abasement ✓</td>
</tr>
<tr>
<td></td>
<td>Autonomy ✓</td>
<td>Affiliation</td>
</tr>
<tr>
<td></td>
<td>Defendence ✓</td>
<td>Cognitive Structure ✓</td>
</tr>
<tr>
<td></td>
<td>Impulsivity ✓</td>
<td>Harmavoidance ✓</td>
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<td></td>
<td></td>
<td>Nurturance ✓</td>
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<td></td>
<td></td>
<td>+ Order ✓</td>
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<td></td>
<td>Sentience ✓</td>
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<td></td>
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<td>+ Succorance ✓</td>
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<td></td>
<td></td>
<td>Infrequency ✓</td>
</tr>
<tr>
<td>Discriminant Analysis</td>
<td>Achievement</td>
<td>Endurance</td>
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<td></td>
<td>Order</td>
<td>Exhibition</td>
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<td>Social Recognition</td>
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<td></td>
<td>Succorance</td>
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</table>

✓ = significant in both measures.

+ = significant to other group in discriminant analysis.

In defendence and impulsivity the directional mean scores and the results of the discriminant analysis were compatible.
For the tentatively decided group, the results of the discriminant analysis indicated the variables which were characteristic of the group were abasement, cognitive structure, endurance, exhibition, harmavoidance, nurturance, sentience and the infrequency scale. Scores for these variables were compatible with the directional mean scores.

Results of the discriminant analysis indicated that the demographic variables which seemed to differentiate between the two groups were sex, university status, grade point average and mother's occupation (see Table 11). These results were in agreement with the directional mean scores.

TABLE 11
RESULTS OF DISCRIMINANT ANALYSIS IN DEMOGRAPHIC VARIABLES CHARACTERISTIC OF THE GROUPS

<table>
<thead>
<tr>
<th>Variables</th>
<th>Undecided</th>
<th>Decided</th>
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<tbody>
<tr>
<td>Sex</td>
<td>More Males</td>
<td>More Females</td>
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<tr>
<td>University Status</td>
<td>More</td>
<td>More</td>
</tr>
<tr>
<td></td>
<td>Upperclassmen</td>
<td>Freshmen</td>
</tr>
<tr>
<td>Grade Point Average</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Mother's Occupation</td>
<td>Less skilled</td>
<td>More skilled</td>
</tr>
</tbody>
</table>

The results indicated that there tended to be more males in the undecided group and that the undecided students tended to have more upperclassmen. The decided group tended to have a higher grade point average and the
mothers of the decided students tended to be more skilled.

The undecided subjects tending to rank higher in social recognition and succorance might indicate they were seeking approval and seeking support. This would support the investigation of Marr (1965) whose study indicated that the subjects who were not self-directing tended to make occupational decisions later. The undecided subjects ranking high in impulsivity and defendence would support Holland and Holland (1977) who suggested that undecided students seem to be interpersonally incompetent and anxious.

The lower grade point average of the undecided group supported Lunneborg's (1975) study which suggested that academic achievement was an important predictor of indecisiveness.

Conclusions

This section presents the major conclusions drawn from the study.

Consistent with some previously reported research findings on undecided and decided students, there seemed to be a number of personality characteristics and demographic categories on which the two groups differed.

The first conclusion reached from this study was that there seemed to be certain variables as measured by the Personality Research Form which seemed to differentiate the undecided from the decided students. Variables on a
univariate scale which seemed to characterize the undecided group were aggression, autonomy, defendence and impulsivity. Variables which seemed to characterize the decided group were abasement, affiliation, cognitive structure, harmavoidance, nurturance, order, sentience, succorance and the infrequency scale.

Secondly, it is concluded that certain demographic factors appeared to be characteristic of the groups. The undecideds tended to have more male students and they tended to have more sophomores, juniors and seniors. The undecideds also tended to have a lower grade point average than the decided group and the mothers of the undecideds tended to be less skilled.

Thirdly, the discriminate analysis listed eighteen of the thirty-one variables as being significant in differentiating between the two groups. Most of these variables were consistent with the directional mean scores for the variables.

The two variables which were hard to explain were succorance and order which the discriminant analysis listed with the undecided group. Perhaps the analysis was able to distinguish the needs of the students. Some other variance was probably interacting with the variable. This is an anomaly caused by interaction of variables.

The variables which seemed to characterize the groups by both the directional mean score and the discriminant
analysis were defencence and impulsivity for the undecided students and abasement, cognitive structure, harmavoidance, nurturance, sentience and the infrequency scale for the decided subjects.

Lastly, the major objective of this study was an attempt to develop an understanding of the personality and demographic factors that differentiated the educationally and vocationally undecided students from the decided students. Several differences appeared to exist between the two groups compared in this investigation. Results of the discriminant analysis indicated that the characteristics of the undecided students included achievement, defencence, impulsivity, order, social recognition, and a lower grade point average. There were more males in the undecided group and more sophomores, juniors, and seniors.

It would seem that students who have not made an educational and vocational decision, wanted to achieve, yet they had a lower grade point average. They also wanted social recognition, yet they were defensive and impulsive. Perhaps the ambiguity and the dissonance which seemed to exist could be lessened if the students would be exposed to a deeper understanding of decision making strategies, to a clearer understanding of the self, to a better understanding of the work world, and to developmental skills.

The nature of the differences found carry some significant implications for seminar leaders and counselors working
with college students on questions of educational and vocational uncertainty. However, caution is urged in generalizing from the findings due to the small sample, and the nature of the groups included in the sample.

**Recommendations for Further Research**

For researchers interested in conducting research which would involve the educationally and vocationally undecided and decided students, several recommendations are suggested.

It is recommended that to improve and extend this study the tentatively decided group might include different populations using vocational choices from various fields. With a wider range of occupational choices, the differentiating variables would perhaps have added meaning.

Several recommendations are proposed to improve the depth of the study. First, it is recommended that a test of self-concept be included. Future researchers might also be interested in differentiating between the groups by administering another inventory such as the Myers-Briggs Type Indicator along with the Personality Research Form and a self-concept scale.

Other recommendations would be to increase the number of demographic variables to be included in the study. It might be relevant to report the number of students who were members of families that had experienced the loss of a parent. Perhaps the absence of a role model is a factor in
educational and vocational decision making. It is also recommended that the groups state the level of their undecidedness and decidedness by using a form of a career decision scale.

It is recommended that research on the differences between female and male undecided and decided students be conducted.

It is recommended that the tests, inventories and questionnaires be administered early in the quarter. It might be instructive to retest at the end of the quarter.

It is recommended that a longitudinal study be conducted to determine the number of undecided students who continue to graduation. It might also be illuminating to note the educational and vocational direction these students might take. It is recommended that a longitudinal study be conducted to determine the number of tentatively decided students who continue to graduation in their stated vocational choice, the number who transfer to other areas and the number who do not continue to graduation.

It is recommended that research be conducted using a larger number of subjects.

It is recommended that some undecided students be involved in a study who have not registered for the Seminar in Career Development.
APPENDIX A

EDUCATION SPECIAL SERVICES INFORMATION FORM

1. Name ____________________

2. Enrolled in Education Special Services
   1. _____ 270-Career Development
   2. _____ 271-Exploring Helping Relationships (F.E.E.P.)

3. Age _____

4. Sex
   1. ____ Female
   2. ____ Male

5. Race
   1. ____ Black
   2. ____ Caucasian
   3. ____ Other ________________

6. Current University Status
   1. ____ Freshman
   2. ____ Sophomore
   3. ____ Junior
   4. ____ Senior

7. Are you presently employed?
   1. ____ Yes
   2. ____ No

8. Grade Point Average
   1. ____ 3.5-4.0
   2. ____ 3.0-3.4
   3. ____ 2.0-2.9
   4. ____ 1.0-1.9

9. Occupation of father ________________
   Occupation of mother ________________

10. Approximate family income
    1. ____ Above $30,000
    2. ____ $25,000-$30,000
    3. ____ $16,000-$24,000
    4. ____ $10,000-$15,000
    5. ____ Below $10,000
BIBLIOGRAPHY


