AN EXPLORATION OF RELATIONSHIPS AMONG
CAREER INDECISION, ANXIETY, LOCUS OF CONTROL, AND
VOCATIONAL INFORMATION SEEKING BEHAVIOR IN DECLARED AND
UNDECLARED MAJOR FIRST YEAR COLLEGE STUDENTS

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by
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CHAPTER I

INTRODUCTION

Rationale and Purpose.

College students today must choose from an increasingly numerous and complex array of college majors and career fields. Those who extend their undergraduate college career due to changes in major field face the difficulty of financing this endeavor. Thus the need to understand educational/ vocational decision-making and assist students in this process is imperative. Not only career counseling professionals hold this opinion. A survey of 629 undergraduate, professional, and graduate students at a large university in Minnesota reported career related and financial concerns highest among students' needs for counseling (Volk, 1985). Higher concern levels were found in the undergraduate group. A second survey of faculty, staff, administrative officers, and campus ministry workers also rated career related issues highest among student concerns (Volk, 1985). This is consistent with a study of perceived orientation needs of new students by Kramer and Washburn (1983) which found that students consistently ranked perceived academic and career planning
needs as most important before and after orientation. Of important issues facing student services professionals delineated by chief student affairs officers, career orientation of students was among the top ten (Valerio, 1980).

However, in the results of "The American Freshman National Norms for Fall 1987" (Astin, 1987) only 5.3% of first year students at public universities estimate that they will seek vocational counseling in college. There appears to be a discrepancy between the perceived level of concern regarding educational/career related issues and the intended use of university career counseling/planning services designed to address these issues.

Of students who do utilize career counseling/planning services, many are attempting to make or change decisions about their major and/or career direction (Harman, 1973). Not surprisingly, career indecision has been a widely studied construct. However, the etiology of career indecision has been found to be complex and confusing. In order to develop more effective interventions to address the multidimensional and crucial career counseling issue of career indecision, continued efforts towards explaining the nature of this construct are necessary (Hartman, Fuqua, & Blum, 1985; Ikenberry, 1987). The literature base of career indecision is inconsistent with regard to populations, terminology, and results. Some studies have
utilized first year students (Abel, 1966; Baird, 1967; Ashby, Wall, & Osipow, 1966, Elton & Rose, 1971) while others have utilized first and second year students together (Cellini, 1978; Taylor, 1982).

Other research indicates that the first year population is distinct from second year and other upperclass populations. Kafka (1975) found that declared and undeclared first year students differed on only three (more outgoing, conscientious, and controlled) of Cattell's sixteen Personality Factor Scales (16PF). In a study of college sophomores, Smith (1981) found undeclared sophomores to self-estimate themselves as being "more timid, experimenting, conscientious, trusting, apprehensive, and less intelligent" than declared sophomores, based on the 16PF. The results of Ikenberry (1987) "...suggest that undecided freshmen and undecided sophomores are different with respect to which factors affect their undecidedness."

Undecided versus Indecisive.

For many years, the construct of indecision has been reported in the literature to be complex and having a variety of etiologies. Within the groups defined as a whole as undecided, subgroups of indecision and indecisiveness (Tyler, 1953) or undecideds and indecisives (Goodstein, 1965; Hartman, Fuqua, & Blum, 1985; Ikenberry, 1987) have been found. For example, the theoretical model
of Hartman et al (1985) distinguishes "...between being undecided and being indecisive about a career, with the former representing a fairly normal developmental sequence and the latter representing a more chronic condition."

The difference between undecidedness and indecisiveness has been defined by the differential anxiety experienced by each group (Goodstein, 1965). For undecided students, the anxiety is called consequent, based on not having made a choice. Indecisive students experience antecedent anxiety, for which anxiety is the major cause of the indecision. This is parallel with Spielberger's (1968, 1972) concepts of state vs. trait anxiety.

Career exploration behavior may be related to the type of anxiety characterizing a particular student. Students scoring high on trait anxiety were found to avoid and/or misinterpret self information and generalize their negative affect to the process of vocational decisions. Students with low anxiety tended to connect self exploration to satisfying vocational decisions (Greenhaus & Sklarew, 1981).

Analyses of the indecision construct have resulted in several distinct factors rather than one homogeneous group (Appel, Haak, & Witzke, 1970; Osipow, Carney, & Barak, 1976). However, much of the research has focused on determining factors of ability and personality characteristics that separate decided students from
undecided students in general. Thus undecided students are characterized as being more dogmatic (Maier & Herman, 1974), more anxious (Kimes & Troth, 1974; Walsh & Levis, 1972), externally controlled (Cellini, 1978; Taylor, 1982), and having lower self-esteem (Barrett & Tinsley, 1977; Marr, 1965; Resnick, Fauble, & Osipow, 1970) than decided students.

Some researchers refer to decided or undecided students in terms of their having declared a major or not. Others have used instruments such as the Career Decision Scale (Osipow, 1980) to differentiate levels of career indecision. Difficulty in evaluating and comparing various results has occurred when students who have not declared a major are designated as undecided, and then are labeled indecisive. This idea is supported by Salomone (1982) who states that "Those who work with college youth may have a tendency to equate being vocationally undecided, a natural state of adolescence, with being indecisive, characterized by identity confusion and anxiety...researchers have used undecided and indecisive interchangeably and erroneously."

**Developmental Issues.**

Of the five basic questions suggested as emphases for researchers by Brown (1984), the first is: "Is it developmentally appropriate for an 18 year old to make a lifetime commitment to a career? When is the opportune
time on the developmental continuum for this choice to be made?" (in Dorn, 1989). Theories of college student development (Perry, 1968; Chickering, 1969) describe the first year college student as dualistic and lacking an integrated identity. Vocational theorists such as Super (1957) and Ginzberg et al (1951) suggest the 17-19 year old is in a stage of exploration and/or beginning a process of specifying a vocational preference. This would suggest that many first year students are not yet prepared to make sound educational/vocational decisions.

However, it appears that not all undecided first year students are identically, and healthfully, undecided. The current study will follow the recommendation of Ikenberry (1987) whose results indicate that both developmentally undecided and chronically indecisive individuals comprised the first year sample and will attempt to differentiate these groups from the whole undecided group.

Thus, some first year students may be undecided because they have made, as Grites (1983) explains: "...The informed choice to be 'undecided' i.e. to close no career options for themselves, and to enter college with an open mind..." and/or because they are dealing with other developmental issues. Other first year students may show signs of chronic indecision, however, their developmental level is not far removed from this etiology of identity.
confusion, external locus of control, and anxiety related to the decision process.

At least three out of four first year college students were found to have some form of undecidedness, tentativeness, or uncertainty about a choice of major at the time of an orientation program just prior to their first year (Titley & Titley, 1980). Foote (1980) reported that 87% of the students in his sample who began college with a decided major, changed their major during the next two years. Of the seventy-five to eighty percent of entering freshmen at Michigan State who declare a major on entry, an estimated 75% will change majors before graduating (Krupka & Vener, 1978).

It seems that the majority of first year students are not ready developmentally and/or do not have adequate information about themselves, college majors, and careers to make satisfactory educational/career decisions. Some of those students may have indecisive and anxious tendencies. An interesting aspect of undecidedness/indecision in first year students is the inherent conflict between the theorized developmental level of first year students and the practical need of these students to attempt to make solid educational/vocational decisions in a specialized and competitive educational/job market.
Effects on Attrition.

Uncertainty of major has been found to be a contributing factor of attrition. Elton and Rose (1970) found that 17% of their undecided first year student subjects persisted to graduation, while 43% of the decided subjects, even if they changed their majors later, persisted to graduation. Such results have prompted the opinion that it is the attitudes toward being undecided that result in attrition (Grites, 1983). Foote (1980) also reported that students who were decided were more likely to stay in school than those who were undecided.

Thus, external pressures— the university, parents, peers— may be giving negative messages to undecided students— first year students included. These students may not receive adequate support and therefore may be more likely to drop out. It is possible that first year students receive messages from these external sources that being undecided is unacceptable. Often the first question asked of a student after "What's your name?" is "What's your major?" The first year student, wanting to appear mature, please parents, or enter certain university programs, may choose a major based on external factors rather than an internal decision process (Grites, 1981, 1983).
Effects on Students.

External pressures that push for early decisions and that fail to support being undecided may be detrimental to first year students. Decisions about major that are made early and without adequate information and decision-making ability may become unsatisfactory. However, when the major is changed it may mean the student must stay in college more than four years to complete a degree.

Another consideration is the relatively few and often stereotyped alternatives from which first year students choose a major/career direction. By the time exposure to the college environment, academic courses, or vocational counseling have dispelled myths and uncertainties for a student regarding non-traditional major/career directions for her/his gender or culture, the student may have time and/or money problems. Students who are undecided their first year are also negatively affected by programs that by design require an early decision regarding major. In these situations, the student who is initially undecided during the first year may take longer to graduate if s/he decides on a major after the first year. Those who perceive they cannot afford the lengthened college career may remain in a less satisfying educational program rather than choose a program that would delay graduation.
Relieving first year students of the stigmas of being undecided and of the pressure to decide during the first year of college could lead to a revitalized and more positive use of career counseling and career exploration programs/resources rather than as services used by students with problems. The ability to distinguish undecided students and indecisive students during the first year could enable counselors to apply more effective interventions. The result could be greater student satisfaction regarding their education, and eventually, their occupation.

A student’s right to choose a major during the first year ought not be removed. However, there is a need to better understand and attend to the career counseling needs of the first year student and to provide adequate guidance, information, and skill instruction to prepare the student to make a more stable, satisfying, and bias-free choice of major and vocational direction.

**Purposes of the current study.**

The current study will concentrate on first year students rather than the general college population in the study of career indecision. First, this study will attempt to give further research support that first year students who have not declared a choice of major are not significantly different than first year students who have declared a choice of major in regards to career
indecision, state anxiety (related to major/career decisions or lack thereof), trait anxiety, locus of control, and vocational information seeking behavior.

Secondly, the current study will address the issue of undecidedness versus indecisiveness. The Career Decision Scale (Osipow, 1980) will be utilized to determine groups of decided and undecided students. The study then proposes a means to easily identify a group with indecisive tendencies utilizing the Trait Anxiety Scale (Spielberger, 1968) in combination with the Career Decision Scale.

A third purpose of the study is to explore differences among the identified groups of decided, undecided, and indecisive students on the variables of locus of control, vocational information seeking behavior, and state anxiety.

The author will suggest implications for the career counseling needs of first year students during their first year of college.
CHAPTER II
LITERATURE REVIEW

This review of selected and relevant research first presents relevant theories and then a chronological development of each major concept of concern to the current study. The concepts to be explored are: Career Indecision, and anxiety, locus of control, and information seeking behavior as they relate to career indecision.

Super's theory of career development.

In his theory of career development, Donald Super (1957, 1963) proposes stages and substages that extend through the lifespan. In his book, Theories of Career Development, Osipow (1983) describes Super's framework as "based on the assumption that vocational tasks reflect larger life tasks". Super suggests that the vocational directions people choose are attempts to express their self-concepts. The particular behaviors one partakes in to implement the self-concept depend in part on the developmental life stage of the individual.

Super proposes two major stages of vocational development and substages within them. These stages are
similar to Ginzberg's (1951) and consist of the exploratory stage, having substages of tentative, transition, and uncommitted trial. This is followed by the establishment stage, having substages of committed trial and advancement. This establishment stage is of particular interest here. The progression through this stage is accomplished through five vocational development tasks within establishment. The first is crystallization, which involves development of ideas about self and occupational concepts and occurs from ages 14-18, approximately. The next task, generally accomplished between the ages 18-21, is specification of a vocational preference. Super suggests behaviors appropriate to these developmental tasks: awareness, use, differentiation, formulation, and planning of concepts to use in determining actions regarding goals, interests and values, and occupations and preferences (Osipow, 1983).

Thus the traditional first year student, being between the ages of 17-19, is likely to be completing or have just completed the crystallization task and is just beginning the process of specification, which would involve choosing a major and/or career direction, according to Super's theory. Significant progress could be made during the first year towards specification. Nevertheless, first year students are at a different point in their vocational development than their upperclass counterparts. Following
Super's definition of vocational maturity (1963) which is the congruence of an individual's vocational behavior and the expected vocational behavior at that age, the first year student who is at the end of crystallization/beginning of specification and is uncertain of a major/career direction is vocationally mature for her/his age.

**Ginzberg's theory of career development.**

A group of vocational theorists, also developmentally oriented (Ginzberg, Ginsburg, Axelrad, & Herma, 1951), "...construed vocational choice as an irreversible process, occurring in reasonably clearly marked periods and characterized by a series of compromises the individual makes between wishes and possibilities (Osipow, 1983). Fantasy, Tentative, and Realistic are the three periods named by these theorists. These periods also have substages of development.

Ginzberg et al thus place the 17-19 year old in the exploration stage of the Realistic period. This stage is characterized by ambiguity and indecisiveness and involves choosing a direction from two or three interest areas. Upperclass students would be completing exploration, and most would reach the crystallization stage (making firm decisions and strengthening commitment to the choice) by graduation. Variability in this process is fairly common, according to Ginzberg.
It is possible, and perhaps likely, that for some first year students, attention to these vocational development tasks could be superceded by the process of adjusting socially, intellectually, and academically to the new college environment.

Identity via Chickering and Perry.

Identity development has also been linked to vocational decisions and indecision. Research that assessed subjects for indecision (Cellini, 1978) and that studied lack of vocational choice (Galinsky & Fast, 1966) have found a correlation between identity formation and indecision/lack of vocational choice.

According to Arthur Chickering's theory of development in traditional college students (1969), young adults tend to cope first with issues of competence, managing emotions, and autonomy before being capable of establishing a sense of identity. Chickering states:

The major constellations of development during adolescence and early adulthood have been variously formulated as 'growth trends', 'developmental tasks', or 'stages of development'... These different formulations accompany differences in point of departure, in emphasis, and in approach, but they have in common seven major areas: competence, emotions, autonomy, interpersonal relationships, purpose, identity, and integrity, each of which has its major components. They are called vectors of development because each seems to have direction and magnitude-- even though the direction may be expressed more appropriately by a spiral or by steps than by a straight line.
Chickering likens the student's first semester to "culture shock", a state of instability and disorientation. This is not a state that would foster integration of identity. In addition, Chickering points to the "emphasis on vocational and professional training at many institutions" as pressuring students to make premature vocational decisions, "...which may hamper the development of identity" (Chickering, 1969).

In his book, *Intellectual and Ethical Development in the College Years*, William Perry (1968) proposes a hierarchical series of nine growth stages moving from simple dualism to complex dualism, to relativism, to commitment in relativism. Within this progression of conceptualizing knowledge, the first year student would tend to be dualistic, searching for an authority to give right answers to uncertainties.

Indeed, the Perry scheme does not speak to an integrated identity until position eight, one of three positions of commitment in relativism. Following this theory, many first year students may not be prepared intellectually to make a sound decision regarding educational and vocational plans. Furthermore, significant development during the first year could move them along the scheme which would indicate that older students, even sophomores, would likely be at a higher level of intellectual development.
Knefelkamp & Slepita's model.

Knefelkamp & Slepita (1978) adapted the Perry scheme in their Cognitive-Developmental model of career development. This model is comprised of career development stages which relate to each of the Perry positions. The student is described as moving from a dualistic view of career decisions to a committed, relativistic view of career decisions (Knefelkamp & Slepita, 1978). In dualism (stages 1 & 2), the students exhibits external locus of control and simplistic thinking. The student tends to believe there is one right career and that some authority figure has the right answer. The stages proposed during multiplicity involve awareness of an ability to make a right or wrong choice among alternatives, and a desire for guidance in this decision process so as to avoid that "wrong" choice.

The development of internal locus of control which allows one to compare outside information with personal experience, the ability to accept responsibility for career choices, and integration of self-identity and career-identity are purported to occur within the stages of relativism and commitment in relativism -- stages not touched by most students until the junior or senior year.

Career Indecision.

Certainly, as long as career decisions have been expected in society, indecision has been problematic. An
early proponent of the idea that there are many causes of vocational decision was Tyler (1953). She suggests two different phenomena: first, indecision, directly related to making a vocational plan of action, and second, indecisiveness, which results from personal problems rather than the issue of vocational direction (Tyler, 1953).

Without benefit of an accurate way to assess for indecision at the time, some studies attended to the declared or undeclared status of students regarding a major. Undetermined first year students were found to be similar to the rest of the first year population in studies by Abel, (1966) and Baird, (1967). Ashby, Wall, and Osipow (1966) found no significant differences were found on the basis of the interest scales of the Strong-Campbell Vocational Interest Blank, yet undecided students were found more dependent than decided students.

The multifaceted nature of the indecision concept gained some empirical support in a factor analysis study by Appel, Haak, & Witzke, (1970). Their results suggest six factors, or subgroups within the undecided population. These factors are: situation specific choice anxiety, data seeking orientation, concern with self identity, generalized indecision, multiplicity of interest, and humanitarian orientation.
Resnick, Fauble, & Osipow (1970) found a lower self-estimate of self-esteem in undecided students. In a longitudinal study by Elton & Rose (1971) no differences in personality or ability were found between graduating seniors, some of whom had not made a vocational choice as first year students.

Other research on undecided students describe them as more anxious (Kimes & Troth, 1974), more dogmatic (Maier & Herman, 1974), and again, having a lower self-estimate of self-esteem (Barrett & Tinsley) than decided students.

A more significant and lasting contribution to the multiplicitic nature of indecision was accomplished by Osipow, Carney, & Barak (1976). They developed a scale of educational and vocational undecidedness that addressed four factors of indecision: Need for structure, Multipotentiality, Block, and Delay. This inventory, called the Career Decision Scale (Osipow, Carney, Winer, Yanico, & Kouschier, 1980) will be utilized in the current study and will be discussed in detail in the "Instrumentation" section.

The work of Gordon (1977) resulted in her claim that "...it can no longer be feasible to report on 'undecided' students without first acknowledging the vast differences in levels of indecision among them." Gordon's study utilized a sample of incoming freshmen at the Ohio State University and studied levels of decidedness,
satisfaction, and ACT student profile and personal background characteristics before and after a pre-orientation career development workshop. Differing levels of indecision and satisfaction were found, suggesting that "Students who are completely undecided on a major but who are satisfied with this state would require a different guidance approach than completely undecided who are dissatisfied." Also, a student who is completely decided about major may also be dissatisfied with that choice. Interestingly, the workshop treatment resulted in more students being completely undecided after the workshop than before it. Gordon suggests the possibility that more options were opened up during the workshop, and/or those students who moved from decided to undecided as a result of the workshop may have become more comfortable with reporting their state of undecidenedness (Gordon, 1977).

The confusing interchange of terminology in the research was considered by Salomone (1982) who claims that "Undecided students and indecisive clients should be clearly distinguished and that, generally, younger persons should not be categorized as indecisive. A different position is stated by Hartman & Fuqua (1983): "While being undecided for many students is a natural step in a developmental process, other students may be experiencing a complex problem inseparable from dysfunctional
personality characteristics." Hartman and Fuqua then call for a practical means of differentiating these two groups.

The term "trait indecisiveness" is utilized by Cooper, Fuqua, & Hartman (1984) to describe vocationally uncertain students exhibiting such personality characteristics as submissiveness, lack of dominance, self-criticism, passivity, and cooperativeness. A relationship between problem solving appraisal and career decision/indecision has been evidenced (Larson & Heppner, 1985). Positive problem solving appraisal was hypothesized to relate to career decidedness. However, a significant number of those designated as decided appraised themselves as negative problem solvers. Larson & Heppner suggest that career planning assistance and attention to differences within decided groups is also appropriate.

The work of Goodstein (1965) distinguishing the undecided from the indecisive served as a basis of a theoretical model by Hartman, Fuqua, and Blum (1985). In this dual explanation of career indecision, a sequence of developmental indecision with state anxiety as its etiology, and a more chronic indecision resulting from trait anxiety and with identity and locus of control as intervening variables, are proposed. Thus both forms of career indecision are based in anxiety, but not the same level and form of anxiety. The model was supported through the findings that state anxiety related to a
developmental indecision of which identity and locus of control were not significant factors. A type of indecision termed chronic was found to relate to trait anxiety, with identity issues and locus of control contributing to the indecision.

In a recent dissertation by Ikenberry (1987) the relationships among personality type, anxiety, and career indecision were studied. The analysis resulted in two different regression models for first year and sophomore groups. Ikenberry discusses the first year sample results:

Interestingly, the stepwise regression model for the freshman sample included trait anxiety rather than state anxiety. The inclusion of trait rather than state does not agree with Hartman, Fuqua, & Blum's (1985) assumption that the path of developmental indecision begins with state anxiety and moves directly to career indecision.

Thus Ikenberry suggests that first year students can be either developmentally undecided or be chronically indecisive and further research should attempt to distinguish between the two groups.

**Anxiety (as relates to Indecision).**

For many years, the concept of anxiety has been utilized to define differences within vocationally undecided students. The two different anxieties experienced by undecided students have been called consequent (from the failure to make a choice)
and antecedent (the major cause of the indecision) (Goodstein, 1965).

Consequent and antecedent anxiety parallel Spielberger's (1968, 1972) concepts of state and trait anxiety. State anxiety is defined as a "transitory emotional state characterized by a subjective, perceived experience of apprehension and tension that fluctuates over time and varies in intensity" (Spielberger, 1972). In terms of career indecision, the anxiety would decrease after a decision is made. Trait anxiety is defined as a "stable characteristic reflecting individual differences with the tendency to perceive a range of situations as threatening" (Spielberger, 1972). Thus trait anxiety would tend to prevent career decision, the process of which produces the anxiety.

The measurement of state and trait anxiety is accomplished with the State-Trait Anxiety Inventory (Self-Evaluation Questionnaire when administered) (Spielberger, Gorusch, & Lushene, 1968). A detailed discussion of the inventory will be given in the "Instrumentation" section of this proposal.

Undecided students have been described as more trait anxious than decided students (Kimes & Troth, 1974; Walsh & Lewis, 1972). The effectiveness of problem solving training and anxiety management training as counseling approaches for indecisiveness were tested by Mendonca &
Siess (1976). The anxiety management training involved learning coping skills for anxiety in order to reduce the anxiety reaction associated with decision making. The problem solving training consisted of developing an understanding of the decision making process and learning appropriate responses to situations that require problem solving. The most effective treatment was found to be a combination of both anxiety management and problem solving as opposed to one or the other. Students who showed improved anxiety coping skills and decision making skills exhibited more vocational exploration behavior and gained more knowledge of their own career paths (Mendonca & Siess, 1976).

Samples of undecided students were found to experience both state and trait anxiety in studies by Holland & Holland, (1977) and Cellini, (1978). The role of anxiety in the career exploration process was investigated by Greenhaus & Sklarew (1981) (previously cited) whose data suggest that the impact of self related exploration may depend upon the person's level of trait anxiety.

Recent attempts to develop accurate path-analytical models of career indecision are models based on the hypothesis that each of the two basic career indecision types have their etiologies in anxiety (Hartman, Fuqua, & Blum, 1985; Ikenberry, 1987). While such efforts have utilized the State/Trait Anxiety Inventory to
differentiate developmental from chronic indecision, the career counseling field is still in need of a method grounded in the research and theory of indecision, to achieve this end.

**Locus of Control (as relates to Indecision).**

Locus of control refers to the internal or external basis of one's actions, thoughts, beliefs, decisions, etc. "The internal-external construct assesses individual beliefs or expectancies concerning control of environmental events, either internally or externally based (Rotter 1954).

The construct of locus of control has been applied often to studies of vocational decision-making as well as many other types of decisions and/or beliefs.

Subjects assessed to have external locus of control are suggested to be more conforming to external forces (Crowne & Liverant; Getter, 1966). Hersch & Scheibe (1967) found no significant correlation between locus of control and intelligence. This counters Taylor's (1982) finding that internal locus of control may facilitate decidedness in high ability students. However, undecided students were found to be externally controlled in studies by Holland & Holland (1977) and Cellini (1978).

Cellini (1978) also reports that locus of control did not distinguish "...by vocational differentiation... thus it is possible that externally oriented persons have been
exposed to significant forces in their environments (parents, teachers, counselors) who have shaped their interests into well defined patterns. Cellini's subjects were 56 male and 60 female undergraduate from Psychology 100 courses at The Ohio State University.

Grites (1981) asserts his position: "Choosing to be undecided...appears to be an overt admission of confusion and uncertainty, while it really may be the healthiest approach one can take when entering the complex college environment and, eventually, the world of work." While he agrees with a multidimensional approach to chronic indecision, Grites (1983) also suggests that "undecided (not indecisive) students have demonstrated an internal locus of control by choosing among a host of alternatives." and despite certain pressures to declare a major.

In addition, some studies have pointed out that externally oriented persons are more vulnerable to external pressures in their environment and thus may conform to decisions suggested by parents, teachers, counselors, or peers (Crowne & Liverant,1963; Getter,1966). If a first year student has "decided" on a major/career direction, how and why was this decision made -- through an internal decision process or based upon a external factors? This idea counters other cited results that assessed undecided students to have external locus of
control and decided students to be more internally controlled (Cellini, 1978; Taylor, 1982).

Taylor (1982) found that external locus of control would increase the tendency of career indecision, and that locus of control contributed more significantly to the variance of indecision in female students than for male students. Taylor attributes this result in part to the socialization of women to perceive less control in life than men (Taylor, 1982).

Self appraised positive problem solvers who were decided based on the Vocational Decision Scale (Jones & Chenery, 1980) and the Career Decision Scale (Osipow, Carney, Winer, Yanico, & Kouschier, 1980) expressed fewer feelings of external control related to indecisiveness and were more certain about their decision-making ability (Larson & Heppner, 1985).

Vocational Information Seeking Behavior.

Early work in exploratory behavior was conducted by Jordaan (1963) who defines exploration as:

...activities, mental or physical undertaken with the avowed or unconscious purpose or hope of eliciting information about oneself or one's environment, or of verifying, or arriving at a basis for a decision, conclusion, solution, or hypothesis, or of being entertained, challenged, or stimulated.

One of the few attempts to measure career exploration behavior is the Vocational Behavior Checklist (Aiken & Johnston, 1973; revised by Gordon, Carney, & Archibald,
1973). This instrument measures the cognitive and behavioral aspects of vocational information seeking behavior (VISB). Both the activity and frequency of activity are considered.

Gordon, Carney, and Archibald (1974) hypothesized that freshmen would become more decided and show more educational/vocational information seeking behavior after completing a highly structured career development experience. They studied groups of undecided freshmen with a group of freshmen in the Arts & Sciences who did not receive the treatment, before and after the treatment. The Arts & Sciences students were more decided and showed more vocational information seeking behaviors (VISB) on the pretest, with no change on the post test. The undecided students increased significantly on the dimensions of decidedness and vocational information seeking.

Students may lack awareness of the available resources for and usefulness of career exploration. Students who completed a 25 hour career decision making class not only were found to have become more internal in locus of control and more articulate in describing career concepts, but were more active in the process of resolving their career concerns than students who did not take the course (Bartsch & Hackett, 1979).
Similarly, a career and self exploration course taken by undecided first year students in the fall of 1981 was reported to have helped first year students to move through the exploration stage of career development (Carver & Smart, 1985). These students were found to utilize career planning services more than controls.
CHAPTER III

METHODOLOGY

Problem Statement.

As indicated in the rationale provided in the introduction and literature review, further and well defined study of decided, undecided, and indecisive first year college students is needed in order to have a clearer understanding of the concept of vocational indecision.

This study will compare declared (CAP area) and undeclared (GBC) major first year college students on the variables of career indecision, anxiety, locus of control, and vocational information seeking behavior. Then, the sample will be differentiated into groups of decided, undecided, and indecisive students based on levels of indecision and anxiety, and the relationships among locus of control and vocational information seeking behavior will be explored.

Ancillary analyses relevant to the literature but not central to the current study will include comparisons of gender differences on career indecision, locus of control, and anxiety, correlations of locus of control and trait
anxiety with vocational information seeking behavior, and correlation of locus of control with trait anxiety.

**Research Hypotheses.**

The following hypotheses are intended to suggest the nature and/or direction of the relationships among the variables of this study:

1) There will not be a significant difference between declared major and undeclared major first year students on the variables of:
   a) Career Indecision (Career Decision Scale)
   b) State Anxiety (related to major/career decisions)
   c) Trait Anxiety
   d) Locus of Control (Internal-External Scale)

2) Undeclared major first year students will report greater frequency of vocational information seeking behavior than declared major first year students.

3) The decided (CDS) and undecided (CDS, State Anxiety) groups will exhibit a similar level of internal locus of control while the indecisive group (CDS, Trait Anxiety) will exhibit external locus of control.

4) The undecided group will exhibit a greater frequency of vocational information seeking behaviors than both the decided and indecisive groups.

**Participants.**

The participants of this study were two groups of traditional, first year students in the initial college of
enrollment, University College (UVC), at The Ohio State University. All of the subjects entered UVC in Autumn, 1988.

One group was drawn from students in the General Baccalaureate Curriculum (GBC, have not declared an intended major). Of the 1,234 students enrolled in GBC in Autumn, 1988, a random sample of 200 served as the pool of subjects of which 19 women and 11 men actually participated.

The other group was drawn from students in all nineteen Curricular Academic Programs (CAPs). Of the 4,885 students enrolled in CAP areas in Autumn, 1988, a stratified random sample of 250 served as the pool of subjects of which 29 women in eleven different CAP areas and 6 men in four different CAP areas (See Table 1) actually participated.

Thus, there was a total of 65 participants. The subjects were chosen if, during Winter, 1989, they were still in their original area of enrollment. However, when the data was collected in early Spring, 1989, some of the participants had changed their area of enrollment.

Of the 65 subjects, 74% were female. The subjects were 18 - 20 years of age, predominantly white, and lived in various residence halls at The Ohio State University.
Instrumentation.

The Career Decision Scale (CDS).

The Career Decision Scale (Osipow, Carney, Winer, Yanico, & Kouschier, 1980) measures the level of educational/vocational indecision in college students. This scale has strong test-retest reliability of .90 and .81 for two samples of college students over a two week period (Osipow, Carney, & Barak, 1976). Sex differences were found insignificant in the normative data (Manual, 1980), however some researchers have found less indecision for males (Gordon & Osipow, 1976) and for females (Taylor, 1979). Using a four point Likert scale, respondents complete 19 items that focus on various aspects of vocational decision making. Items one and two of the scale indicate the degree of vocational and educational decidedness and are called the Certainty Scale (CDS-C). These two items correlate negatively with items 3-18 which compose the Indecision Scale (CDS-I) and thus further validate the scale (Osipow, Carney, & Barak, 1976).

Item nineteen is an open ended fill in the blank question. Most researchers have not considered these responses in their data analyses.

There are four factors of undecidedness within the Career Decision Scale, the validity of which is questionable. An overall indecision score is calculable. The four factors suggested are:
1) Need for structure (lacks information about self and occupation).

2) Multipotentiality (difficulty in choice between two or more alternatives).

3) Block (decision process is blocked).


Higher scores on the Career Decision Scale indicate greater indecision. The range of possible scores is from 16 to 64. The median score of a sample has been used to distinguish undecided from decided students when the median was near or at the median (28) reported in normative data (CDS manual, Osipow, 1980). However, for this study the structure of the inventory was analyzed to determine criteria for separating groups. The criteria selected for the undecided group were that one of the two items in the Certainty Scale was scored a one or a two (Not Like Me) or if one fourth of the items in the Indecision Scale were scored a three or a four (would be a score ≥ 36). Thus students who scored greater than five on the Certainty Scale and less than 36 on the Indecision Scale were placed in the decided group.
State-Trait Anxiety Inventory (STAI).

When administered to subjects, the State-Trait Anxiety Inventory is called a Self Evaluation Questionnaire, so as to avoid producing anxiety based on taking the inventory. The inventory has complete instructions on it and thus is self-administering, requiring about 15 minutes to complete.

The STAI measures two distinct anxiety concepts: State Anxiety (STAI-Y1) and Trait Anxiety (STAI-Y2). State Anxiety is measured first, consisting of twenty statements on one side of a page that ask about how one feels at a particular moment in time. On the other side of the page are twenty statements that measure Trait Anxiety by asking how one generally feels.

Form Y is revised from Form X and is considered a better measure. The State Anxiety measure can be made situational to the area of interest to the researcher. For this study, subjects were asked to respond to the State Anxiety items in regards to their decisions about a major/career direction or lack thereof.

The subjects respond to the statements on a four point Likert scale. On the State Anxiety statements, the intensity of feelings are described, while on the Trait Anxiety statements, the frequency of anxious feelings are indicated. Minimum scores of 20 and maximum scores of 80
are possible on each of the two scales (Spielberger, Gorusch, & Lushene, 1968).

The validity of Form Y based on Form X is rated good. The correlation of the STAI and other measures of trait anxiety are moderately high (.41 to .85) for both college students and patients. Test-retest coefficients are low, as expected, for State Anxiety, while test-retest reliabilities were high (.73-.86) on Trait Anxiety over intervals from one hour to 104 days (Manual, 1970). The normative data reports that female college students "...were slightly higher in state and trait anxiety than their male counterparts" (manual, 1983).

For the current study, the structure and scoring of the inventories were considered and it was decided that for a student to be considered high on either state or trait anxiety, one third of his/her responses would need to have score values of three or four with other responses having score values of two. Thus the cutoff was set at greater than or equal to 50, the middle of the scoring range.

**Internal/External Scale (I-E)**

An evaluation of locus of control would be accomplished using Rotter's Internal External (I-E) Scale (Rotter, 1966). The internal-external construct assesses individual beliefs or expectancies concerning control of environmental events.
The scale consists of 29 paired statements with six filler statements that are not scored. One statement of each pair describes an internal state while the other describes an external state. The inventory has a forced choice format. The score is the sum of items selected which indicate belief in external locus of control; the higher the score, the greater the external locus of control. Test-retest reliability of the I-E is .60 for males (n=30) and .83 for females (n=30) over a one month interval and .49 for males (n=63) and .61 for females (n=54) over a two month interval. These subjects were psychology 100 students at The Ohio State University. In addition, internal consistency correlations range from .65 to .79 (Rotter, 1954).

Vocational Checklist (VC)

The Vocational Behavior Checklist (Aiken & Johnston, 1973) measures the cognitive and behavioral aspects of vocational information seeking behavior (VISB). For each item, the subject indicates the approximate number of times s/he has engaged in a specific VISB over the last six months. The inventory was adapted to focus on college student populations and called the Vocational Checklist by Gordon, Carney and Archibald (1973).

Frequencies of VISBs are selected from a six point scale ranging from never (0) to very frequently (6). Total scores on the Vocational Behavior Checklist range
from 0 to 144. The split-half reliability coefficient obtained on the Vocational Checklist from a sample of 176 Ohio State University students enrolled in the General Baccalaureate Curriculum was .90.

Procedure.

All participants were given a thorough description of the study and signed the consent form. Test folders included complete instructions, consent forms, and the inventories. A letter was sent to each subject in the pool describing the study, and informing the subject that s/he may receive a telephone call requesting participation. Subjects were then contacted by phone and if the student agreed to participate, either arranged a testing time or were hand delivered a test folder to be completed and returned/picked up by a certain time. All participants were reminded to read all instructions, and important points of instruction were emphasized verbally.

A demographic data sheet was included in the test folder. Participants were asked to fill out the top portion of their age, sex, and CAP area or GBC. The bottom section asked for those students who wanted feedback to give their name and address. Participants were told not to put their name on any of the inventories and the test folders were number coded. Thus all responses were kept anonymous and only those subjects requesting feedback will be reassembled and evaluated.
In completing a test folder, a subject first read the information and instructions sheet, and signed the attached copy of the consent form, keeping both for her/his records. A second copy of the consent form was signed for the researcher. The demographic data sheet was filled out next, to be placed on top of the folder contents when returned to the researcher. The instruments were completed in the following order: Vocational Checklist, Rotter Internal-External Scale, Career Decision Scale, State Anxiety, and Trait Anxiety. Completion of the test folder required approximately thirty-five to fifty-five minutes.

**Statistical Analyses.**

The analysis of data for this study required comparisons of groups and correlations. Analyses of gender differences are limited to overall sample correlations on certain variables due to the low numbers of male subjects in the various groups. The method of analyses would have involved t-tests and analysis of variance, however, the univariate distributions for the various tests were not normal. Thus non-parametric statistical methods were utilized, for which a normal distribution is not necessary. The Wilcoxon two sample test was utilized for all two group comparisons. The Kruskal-Wallis test was utilized to indicate differences among three group comparisons. Certain ancillary analyses
were tested with Pearson's correlation coefficient. All tests were performed at .05 significance.

DEFINITION OF TERMS

The following list of defined terms is to clarify for the reader the use of these terms throughout the study:

Curricular Academic Program (CAP area) Students: First year students at The Ohio State University (OSU) enter the university through the non-degree granting University College (UVC). They may "declare a major" by designating their area of proposed study through a CAP area.

Declared-Major Student: One who has chosen a CAP area, has officially reported this CAP area as the intended area of study.

General Baccalaureate Curriculum (GBC) Students: First year students at The Ohio State University (OSU) enter the university through the non-degree granting University College (UVC). They may choose not to select an area of study by designating their area of enrollment as GBC.

Undeclared-Major Student: One who has indicated their undecided status by choosing the General Baccalaureate Curriculum (GBC) rather than a CAP area.

Decided Student: A student who indicates certainty of major field/career direction. For this study, a student who scored greater than 5 on the Certainty Scale and less
than 36 on the Indecision Scale of the Career Decision Scale (Osipow, 1980).

Undecided Student: A student who indicates uncertainty of major field/career direction. For this study, one who scores less than or equal to 5 on the Certainty Scale or greater than or equal to 36 on the Career Decision Scale (Osipow et al, 1980).

Undecidedness: A condition in which a student is uncertain of major field/career direction due to her/his current developmental stage and is experiencing consequent anxiety due to her/his lack of choice, or is not concerned with the choice as a result of dealing with other developmental issues (Hartman, Fuqua, & Blum 1985; Ikenberry, 1987; Goodstein, 1965).

Indecisive Student: A student who indicates uncertainty of major field/career direction and a high level of trait anxiety, suggesting a general tendency to perceive stressful life situations as more threatening and difficult than those with lower levels of trait anxiety. For this study, a student who meets the undecided criteria and has a Trait Anxiety score greater than or equal to 50.

Indecisiveness: A condition in which a student is uncertain of major field/career direction due to her/his current developmental stage and due to a fairly chronic condition in which anxiety as a personality trait is
manifested in the decision process and is a major cause of the indecision.

**State Anxiety:** Parallel to consequent anxiety, "a transitory emotional state characterized by a subjective, perceived experience of apprehension and tension that fluctuates over time and varies in intensity" (Spielberger, 1972) relative to stressful situations.

**Trait Anxiety:** Parallel to antecedent anxiety, "a stable characteristic reflecting individual differences with the tendency to perceive a range of situations as threatening (Spielberger, 1972).

**Locus of Control:** The internal or external basis of one's thoughts, beliefs, actions, decisions, etc. "The internal-external construct assesses individual beliefs or expectancies concerning control of environmental events, either internally or externally based (Rotter, 1954).

**Career Exploration Behavior:** "Activities, mental or physical, undertaken with the avowed or unconscious purpose or hope of eliciting information about oneself or one's environment, or of verifying, or arriving at a basis for a decision, conclusion, solution, or hypothesis, or of being entertained, challenged, or stimulated" (Jordaan, 1963)

**Identity:** From Ikenberry (1987): "An individual's integration of previous identifications and role experiences" (Erikson, in Hartman & Fuqua, 1983).
Holland, Gottfredson, & Nafziger (1975) conceived of identity as a clear knowledge of one's competencies, preferred activities, interests, and vocational goals. Identity confusion would result when one's idea of self is shaky, unsolidified, and distorted (Hartman & Fuqua, 1983).

**First Year Student:** An 18 to 20 year old traditional freshman student who entered the university for the autumn term of the new academic year, after graduating from high school the previous spring.
CHAPTER IV
RESULTS

The results are presented in three major sections. First, comparisons of declared (CAP area) students and undeclared (GBC) students are reported. Then the results of the decided, undecided, and indecisive group comparisons are given. Univariate means and standard deviations of the whole sample are provided in Table 2 for descriptive purposes. Frequency and percentage information will be reported in addition to the Wilcoxon and Kruskal-Wallis results. Reported means are the actual average scores for various groups and not means calculated by rank sums for the Wilcoxon tests.

Finally, the whole sample comparisons by sex on the variables of career indecision, locus of control, and trait anxiety will be presented. In addition, overall correlations of locus of control with vocational information seeking behavior (VISB), trait anxiety with VISB, and trait anxiety with locus of control will be reported.
**Declared (CAP area) and Undeclared (GBC) Comparisons.**

The relevant hypotheses for the declared (CAP area) and Undeclared (GBC) groups are hypotheses one and two:

1) There will not be a significant difference between declared major and undeclared major first year students on the variables of:
   a) Career Indecision (Career Decision Scale)
   b) State Anxiety (related to major/career decisions)
   c) Trait Anxiety
   d) Locus of Control (Internal-External Scale)

2) Undeclared major first year students will report greater frequency of vocational information seeking behavior than declared major first year students.

Hypothesis (1a) was not supported. The Career Decision Scale has two scales, Certainty and Indecision. Eleven subjects in the declared group (n=35) scored at or below 5 on the Certainty Scale indicating uncertainty of major/career choice and/or ability to implement the choice. Five subjects in the undeclared group (n=30) scored above five on the Certainty Scale suggesting certainty of major/career choice and/or ability to implement the choice. The distribution of scores are graphically represented in Figure 1. The Certainty Scale scores were not submitted to a test due to the low scores and range of scores possible.
The Wilcoxon test for the Indecision Scale was significant ($Z = 0.0025$), thus not in support of hypothesis (1a) (Table 3). The undeclared group reported more indecision, however, 40% of the declared subjects were undecided under the set criteria. The mean score for the undeclared group was 36.03 while the mean for the declared group was 29.66.

The State Anxiety Scale (STAI-Y1) was administered specific to a subject’s current feelings concerning major/career decisions or lack thereof. There was a significant difference on the Wilcoxon for the STAI-Y1 ($p > Z = 0.0362$), thus Hypothesis (1b) was not supported. The undeclared group reported higher levels of state anxiety related to current major/career issues (Table 3) with a mean score of 49.27 as opposed to the mean score of the declared group on the STAI-Y1 of 43.57.

While the Career Decision Scale and the State Anxiety Scale each differentiated the declared and undeclared groups significantly, there was not a significant difference between these two groups on the Trait Anxiety Scale ($p > Z = 0.6305$) (Table 3). This sample overall was not high in trait anxiety with mean scores of 44.10 and 43.26 for undeclared and declared groups, respectively.

Hypothesis (1d) was also supported as there was no significance between the groups on the Internal-External (I-E) Scale ($p > Z = 0.4596$) (Table 3). Some researchers
have set the criterion for grouping external subjects as a score greater than or equal to twelve on the I-E (Cellini, 1980). Based on this criterion, the sample was not highly external (undeclared mean score = 11.73, declared mean score = 11.20) especially considering the purported externality of traditional first year college students by developmental theorists such as Perry and Chickering.

Undeclared students did not report significantly greater vocational information seeking behavior than declared students (Table 3). Hypothesis (2) was not supported with $p > Z = 0.3958$. In general the amount of exploration reported by this sample appears relatively low, with the undeclared group having an average score of 45.40 and the declared group having an average score of 52.77 on the Vocational Checklist. This is not in conflict with theorized priorities of issues and interests for 18 - 20 year old college students.

Decided, Undecided, and Indecisive group comparisons.

Frequencies and percentages by gender and by enrollment status (Declared - CAP, Undeclared, - GBC) in the decided, undecided, and indecisive groups are presented in Table 4. The frequencies and percentages of CAP students and GBC students in the decided, undecided, and indecisive groups are stated in Table 5. Overall frequencies and percentages of decided, undecided, and indecisive students in the
sample are reported in Table 6. Hypotheses three and four are relevant to the decided, undecided and indecisive groups:

3) The decided and undecided groups will exhibit a similar level of internal locus of control while the indecisive group will exhibit external locus of control.

4) The undecided group will exhibit a greater frequency of vocational information seeking behavior than both of the decided and indecisive groups.

The Kruskal-Wallis Test was significant \((p > \text{CHISQ} = 0.0287)\) for locus of control (Internal-External Scale) (Table 7) thus Wilcoxon Tests were performed on group pairs to determine where the difference was occurring. No significant difference was found between the decided and undecided groups \((p > Z = 0.9728)\) (Table 8). Significance was found between the decided and indecisive groups \((p > Z = 0.0123)\) (Table 9) and between the undecided and indecisive groups \((p > Z = 0.0159)\) (Table 10). With the criteria of career indecision and trait anxiety to separate the groups, the decided and undecided groups scored similarly internal (decided group mean = 10.95; undecided group mean = 10.87) while the indecisive group scored external (indecisive group mean = 14.4). This was the predicted outcome of Hypothesis (3).
Regarding vocational information seeking behavior, the reported scores on the Vocational Checklist were not significantly different between any of the groups (Table 11). The Kruskal-Wallis indicated \( p > CHISQ = .1800 \), and did not support Hypothesis 4.

**Additional Analyses on Decided, Undecided, Indecisive.**

None of the Hypotheses predicted outcomes on the State Anxiety Scale (STAI-Y1) for the decided, undecided, and indecisive groups. However, the State Anxiety scores were not used to differentiate the groups and thus differences among groups were explored. A significant difference was indicated by the Wilcoxon \( p > Z = 0.0020 \) between the decided and undecided groups, and significance was also found between the undecided and indecisive groups \( p > Z = 0.0060 \). The decided group had lower scores on the STAI-Y1 than the undecided group, and the undecided group had lower scores on the STAI-Y1 than the indecisive group.

**Ancillary Analyses.**

**Gender Differences.**

The numbers of male subjects in various groups were not sufficient to substantiate differentiation by sex in this study. However, based on the literature, gender may be a significant variable for measures of career indecision, locus of control, and anxiety. Thus the whole sample was compared by sex on the Career Decision Scale (Indecision
Scale), the Trait Anxiety Scale, and the Internal-External Scale (Table 12). The sample consisted of 48 females and 17 males.

The analysis for the variable of career indecision (CDS-I) resulted in an insignificant Wilcoxon test result ($p > Z = 0.2091$) as did the test on the locus of control variable (I-E) ($p > Z = 0.08691$). Thus the scores on the Indecision Scale and the Internal-External Scale for males and females were similar. The mean score on the CDS-I was 31.60 for the female group and 35.41 for the male group. However, there was a higher ratio of decided students in the female group than in the male group. The female average on the I-E was 11.48 and the male average was 11.41, and may be considered on the borderline between internality and externality.

The Wilcoxon indicated a significant difference between male and female scores on the Trait Anxiety Scale ($p > Z = 0.0269$). Female subjects reported higher levels of trait anxiety, however, the mean score for the female group of 44.91 indicates that the female group was not high in trait anxiety and was not that much higher than the male group mean of 40.05.

Pearson Correlations.

The various Pearson Correlation results are listed in Table 13. There was a negligible correlation between scores on the Internal-External Scale and the Vocational
Checklist ($r = 0.045$) and between the Trait Anxiety Scores and the Vocational Checklist ($r = 0.116$). The correlation between Trait Anxiety and Internal-External scores was $r = 0.43$, a low to moderate relationship.
CHAPTER V

DISCUSSION

The final chapter will interpret and integrate the results in relation to the stated hypotheses, developmental theory, and past research, following the format of the previous chapter by considering each hypothesis and then the ancillary analyses.

Hypotheses.

Differences between declared and undeclared.

Hypothesis 1a-d proposed no difference between declared and undeclared first year students on the variables of career indecision, state anxiety, trait anxiety, and locus of control.

It was considered possible that many first year students declared intended majors to avoid social disapproval for being undeclared. The test results for the Career Decision Scale and the State Anxiety Scale (specific to current feelings about major/career decisions or lack thereof) did not support this idea.

However, 40% of the declared subjects met the criteria for undecidedness. The results of research that equates declared and undeclared students with decided and
undecided students may be inaccurate due to various factors that cause a student to declare a major or not, and due to those declared students who have changed their mind about the declared major yet do not have a major to take its place. Career indecision is an internal state and should be consistently assessed and considered as such.

As predicted, there was not a significant difference between declared and undeclared students' levels of trait anxiety or locus of control. In general, the sample did not report high scores on trait anxiety or locus of control. Again, first year college students may have various reasons and situations behind their enrollment status. These test results suggest that an undeclared status does not indicate personality related anxiety or external locus of control for first year college students. This supports the findings of other studies (Baird, 1966, Elton & Rose, 1971, Ashby, Wall, & Osipow, 1966, Foote, 1980). In fact, higher levels of anxiety and external locus of control than were reported would not have been contradictory to the normal developmental struggles of young adulthood.

Contrary to the suggestion of Hypothesis 2, that undeclared students would indicate more exploratory behavior than declared students, no difference was found on vocational information seeking behavior (VISB).
Several responses are plausible regarding this result. Since declared students did not participate in more VISB than undeclared, did they make their decisions with inadequate information? If declared subjects did more exploration prior to coming to college, one would think that undeclared students would show more VISB in the past six months as measured by the Vocational Checklist, which they did not.

Perhaps the amount of exploratory behavior is not as important as how the information is utilized. The basic issue may have to do with the use of information in the decision process. According to the career development theorists, Knefelkamp & Slepitza, the 18-20 year old assessed as decided would tend to have made an externally based, dualistic choice rather than an internally based, relativistic commitment to her/his educational/career direction. In addition, the low scores on the Vocational Checklist support developmental theory that suggests a first year student would not be motivated to work on the issue of commitment to educational/career direction as much as s/he would be motivated to address issues of autonomy and managing emotions (Chickering, 1969; Knefelkamp & Slepitza, 1978).

**Differences between decided, undecided, & indecisive.**

It appears that more declared first year students may in fact be undecided or indecisive than undeclared first
year students are decided about major/career direction (See Tables 8,9). In this sample, 63.1% of the students were considered undecided or indecisive (47.7% undecided, 15.4% indecisive; see Table 6) indicating that a majority of first year students may be quite unsure of their choice of major, choice of career direction, and how the two relate, regardless of their enrollment status.

Hypothesis 3 predicted that, based on levels of career indecision and trait anxiety, groups of decided and undecided would be similarly internal while the indecisive group would be external on locus of control. The results supported this hypothesis. External locus of control has been called facilitative of vocational indecision by Taylor (1982) and named as a characteristic of undecided students by Holland and Holland (1977) and Cellini (1978). However, the test results suggest that it is a subgroup of undecided students whose trait anxiety is manifested in career indecision is related to external locus of control. Other first year undecided students are not more external than decided students.

The criteria utilized to separate the groups is given validity based on the locus of control results. In addition, state anxiety was also differentiated by the groups with the decided group scoring lower than the undecided group and the undecided group scoring lower than the indecisive group on state anxiety specific to
major/career decisions or lack thereof. Normative data indicates a correlation between trait and state anxiety (manual, 1983). High trait anxious persons are said to experience greater intensity of situational anxiety than low trait anxious persons (manual, 1983).

No significant differences were indicated among groups on frequency of vocational information seeking behavior (VISB). In general, points of discussion for this result are similar to those given in regards to the declared and undeclared groups. However, the lack of lower levels of VISB by the indecisive group does not support the findings of Greenhaus & Sklarew (1981) which suggest that high trait anxious persons may avoid participation in career exploration activities. Perhaps the developmental factors for first year college students have a stronger effect on VISB than does trait anxiety.

Ancillary Analyses.

Gender Differences.

Whole sample comparisons by sex were insignificant for career indecision and locus of control and significant for trait anxiety.

Although the test result indicates similarity between males and females on career indecision, the female sample had a greater number of decided students than the male sample. This may not reflect the general population, thus
further investigation may be necessary. Normative data do not suggest sex differences on career indecision (manual, 1980).

It has been suggested that female students tend to be more externally controlled than their male counterparts (Horner, 1972, Taylor, 1980). This finding was not supported by the results of this first year college student sample. Females scored somewhat higher on trait anxiety than males and the test of difference was significant. It is not accurate to label the female group as trait anxious as neither the female nor the male group mean met the criterion score for high trait anxiety. In addition, females may tend to report their levels of anxiety more accurately than males, who tend to be socialized not to admit weakness or express emotions.

Pearson Correlations.

Vocational information seeking behavior (VISB) did not correlate significantly with locus of control or trait anxiety. It appears that frequency of VISB does not relate to locus of control and perhaps decision making ability would be a more salient factor to consider in relation to locus of control (Holland & Holland, 1977; Larson & Heppner, 1985). The correlation between VISB and trait anxiety was very low and contrary to the findings of Greenhaus & Sklarew who related trait anxiety with avoidance of career exploration activity. This sample of
first year college students exhibited relatively low VISB, levels of which did not suggest external locus of control or trait anxiety.

A low to moderate correlation ($r = 0.43$) between trait anxiety and locus of control adds support to previous discussion regarding the interaction of combined career indecision and trait anxiety with external locus of control.

**Implications and Recommendations.**

The findings of the present study reflect the complexity of career indecision in general and specific to first year college students and imply a need for educational/career counseling tailored to the special needs of first year college students. Further work is needed to promote greater understanding and acceptance of the career planning process, of undeclared status students, the difference between undecided and indecisive students, and the purpose, use, and benefits of career exploration and career counseling.

Overall, research indicating and explaining differences between undecided and indecisive students has been documented for years. Such results have not always been implemented in the daily practice of educational/career counselors. The current study suggests the use of the Career Decision Scale in combination with the State-Trait Anxiety Scale to begin to address the difference between
students who are undecided due to developmental or situational reasons and students with indecisive tendencies based in trait anxiety. Both instruments are easy to administer and score. The counselor's approach should avoid labeling and utilize the inventories as a counseling tool. A counselor may offer a more direct, informational and decision making skills approach to undecided students, while addressing the issue of anxiety in decision making in students with indecisive tendencies before initiating other interventions. Even without assessment of these constructs, counselors should be sensitive to these issues in their practice with first year college students.

It seems most appropriate for first year college students to have access to centralized, comprehensive educational and career counseling services. First year students would benefit from counselors with knowledge of educational programs and requirements, occupational opportunities and trends, and the relationship between majors and careers, as well as student and career development theory, and sensitivity to the counseling issues of career counseling such as family conflict and indecisiveness.

This service ought to make educational and career information highly accessible to first year students who may not readily seek out this information but would
benefit from it once obtained. Programming and counseling ought to emphasize the use of major, career and self-related information in the decision process.

This approach may lead to greater satisfaction with major/career direction. In addition, first year students who feel supported in their uncertainties, and who either gain a sense of direction or at least an understanding of their undecidedness may tend to persist in college more often than students who feel confused and hopeless.

The structure of certain academic programs should be changed to allow greater flexibility of choice during and at the end of the first year of college without interfering with a general four year plan for undergraduate studies. This would allow the impact of educational/career counseling during the first year to be implemented with fewer barriers, would likely increase the use of such services, and would be more congruent with the needs of first year college students voiced by student and career development theories, past research, and the current study.

Limitations.

The limitations of this study include the sample size, lack of differentiation by sex, the use of non-parametric statistical methods, and the possibility of inaccurate scores due to subjects' attempts to "look good".
The major limitation of this study was the small sample size. This was due to delays in obtaining the list of potential subjects and in the data collection process. As a result, the sample size was small, and all of the actual participants lived in the residence halls. One may question the ability to generalize the results of a small sample to the large numbers of first year students enrolled in University College and to first year college students in general. However, the participants lived in many different residence halls and were taken from random and stratified random samples.

Another sample related limitation is the predominance of women in the sample which precluded analyses by sex throughout the study. In many research situations, gender is a confounding variable that ought to be controlled for.

Since the univariate distributions on the variables studied were not normal for this sample, non-parametric statistics were utilized in the data analyses. The use of t-tests and analysis of variance would have provided more powerful tests. Yet even with the use of less powerful tests and a small sample size, significance was found on certain comparisons. This may indicate fairly strong effects for the non-parametric procedure to identify significant differences.

An additional limitation to consider is the possibility that subjects may report data with an effort to "look
good" to the researcher, specifically with measures such as the State-Trait Anxiety Scale and the Career Decision Scale which may call for a subject to report what may be considered negative information about her/him self. Written and verbal instructions and assurance of confidentiality sought to minimize inaccurate response sets.

**Future Research.**

Future research on issues of career indecision in first year college students should focus on types and effectiveness of developmental career counseling interventions in relation to specific groups of students (i.e. undecided, indecisive, males, females, black students, white students) rather than undecided students in general.

Replication of this study is necessary, with a large sample, differentiation by sex, and utilization of parametric statistical techniques. Further study of the combined use of the Career Decision Scale and the Trait Anxiety Scale for separating indecisive students from the undecided group and as a counseling tool is also needed.

Additional study of vocational information seeking behavior in first year students might address what types of exploratory behavior are reported by various groups and how this information is used in the decision process.
Another important line of research would be to study the differences between males and females in the etiology of their career indecision and their approaches to the resolution of career indecision.

Brown (1984) suggests that researchers address the types of programming and counseling "...necessary for career counseling to be treated as one component of a truly holistic approach to educating students" (in Dorn, 1989). This thesis has attempted to take this direction and provide support for this philosophy.
BIBLIOGRAPHY


Smith, H.D. (March 5-6, 1981). Using the 16PF and a personality self rating instrument to assess differences between declared and undeclared university sophomores. Paper presented at the Joint Annual Conference of the International PF (1st) and the California Polytechnic Career-Vocational Association (2nd), San Luis Obispo, CA.


<table>
<thead>
<tr>
<th>Area of Enrollment and Sex</th>
<th>Females n=48</th>
<th>Males n=17</th>
<th>Total n=65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undeclared (GBC)</td>
<td>19</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Declared (CAP areas) Total</td>
<td>29</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>CAP areas Represented:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arts &amp; Sciences</td>
<td>9</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Allied Medical</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Architecture</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Business</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Education</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Home Economics</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Music</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Nursing</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Pre-Medicine</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pre-Optometry</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Social Work</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 2

Univariate Means and Standard Deviations for Career Indecision, Anxiety, Locus of Control, and Vocational Information Seeking Behavior.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=65</td>
<td></td>
</tr>
<tr>
<td>Career Decision Scale:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certainty Scale</td>
<td>4.86</td>
<td>2.15</td>
</tr>
<tr>
<td>Career Indecision Scale</td>
<td>32.60</td>
<td>8.07</td>
</tr>
<tr>
<td>State Anxiety Scale</td>
<td>46.20</td>
<td>13.91</td>
</tr>
<tr>
<td>Trait Anxiety Scale</td>
<td>43.64</td>
<td>7.70</td>
</tr>
<tr>
<td>Internal-External Scale</td>
<td>11.44</td>
<td>4.21</td>
</tr>
<tr>
<td>Vocational Checklist</td>
<td>49.36</td>
<td>21.66</td>
</tr>
</tbody>
</table>

**Note.** Criteria utilized to form groups:

Career Decision Scale:  
- Certainty ≤ 5 or Indecision ≥ 36 = Undecided
- Trait Anxiety Scale:  
  - ≥50 and Undecided = Indecisive
Table 3

Wilcoxon Tests on Measures of Career Indecision, State Anxiety, Trait Anxiety, Locus of Control, and Vocational Information Seeking Behavior.

<table>
<thead>
<tr>
<th></th>
<th>Declared</th>
<th></th>
<th>Undeclared</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=35</td>
<td>M</td>
<td>n=30</td>
<td>M</td>
</tr>
<tr>
<td>a)</td>
<td>CDS-I</td>
<td>29.66</td>
<td></td>
<td>36.03</td>
</tr>
<tr>
<td>b)</td>
<td>STAI-Y1</td>
<td>43.57</td>
<td></td>
<td>49.27</td>
</tr>
<tr>
<td>c)</td>
<td>STAI-Y2</td>
<td>43.26</td>
<td></td>
<td>44.10</td>
</tr>
<tr>
<td>d)</td>
<td>I-E</td>
<td>11.20</td>
<td></td>
<td>11.73</td>
</tr>
<tr>
<td>e)</td>
<td>VC</td>
<td>52.77</td>
<td></td>
<td>45.40</td>
</tr>
</tbody>
</table>

Note. Means are actual average scores and not the mean score based on Wilcoxon rank sums. Normal approximation with continuity correction of .5.

CDS-I: Career Decision Scale - Indecision
STAI-Y1: State Anxiety Scale
STAI-Y2: Trait Anxiety Scale
I-E: Internal-External Scale
VC: Vocational Checklist

a) \[ Z = 3.0184; \] PROB \( > Z \) = 0.0025
b) \[ Z = 2.0948; \] PROB \( > Z \) = 0.0362
c) \[ Z = 0.4810; \] PROB \( > Z \) = 0.6305
d) \[ Z = 0.7395; \] PROB \( > Z \) = 0.4596
e) \[ Z = 0.8491; \] PROB \( > Z \) = 0.3958.
Table 4

Frequencies and Percentages by Sex and Enrollment Status in Decided, Undecided, and Indecisive Groups.

<table>
<thead>
<tr>
<th>Level</th>
<th>#F</th>
<th>%F n=48</th>
<th>%F</th>
<th>#M</th>
<th>%M n=17</th>
<th>%M</th>
<th>#GBC</th>
<th>%GBC n=30</th>
<th>%GBC</th>
<th>#CAP</th>
<th>%CAP n=35</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>21</td>
<td>43</td>
<td>3</td>
<td>18</td>
<td>10</td>
<td>10</td>
<td>21</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undecided</td>
<td>19</td>
<td>40</td>
<td>12</td>
<td>70</td>
<td>20</td>
<td>20</td>
<td>11</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indecisive</td>
<td>8</td>
<td>17</td>
<td>2</td>
<td>12</td>
<td>7</td>
<td>24</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. There was a greater ratio of male undecided subjects than female.
F = female; M = Male
GBC = Undeclared; CAP = Declared
Table 5

Frequencies and percentages of declared and undeclared subjects in the decided, undecided, and indecisive groups.

<table>
<thead>
<tr>
<th></th>
<th>Declared (CAP area)</th>
<th>Undeclared (GBC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Decided</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Percent</td>
<td>87</td>
<td>13</td>
</tr>
<tr>
<td><strong>Undecided</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Percent</td>
<td>35</td>
<td>65</td>
</tr>
<tr>
<td><strong>Indecisive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>n=10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Percent</td>
<td>30</td>
<td>70</td>
</tr>
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</table>
Table 6
Frequencies and Percentages of Decided, Undecided, and Indecisive Subjects in the Sample.

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>Percent</th>
<th>Cumulative n</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>24</td>
<td>36.9</td>
<td>24</td>
<td>36.9</td>
</tr>
<tr>
<td>Undecided</td>
<td>31</td>
<td>47.7</td>
<td>55</td>
<td>84.6</td>
</tr>
<tr>
<td>Indecisive</td>
<td>10</td>
<td>15.4</td>
<td>65</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 7
Kruskal-Wallis Test on Locus of Control

Wilcoxon Scores (Rank Sums)

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>SD under HO</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>24</td>
<td>73.31</td>
<td>30.13</td>
</tr>
<tr>
<td>Undecided</td>
<td>31</td>
<td>75.87</td>
<td>30.52</td>
</tr>
<tr>
<td>Indecisive</td>
<td>10</td>
<td>54.81</td>
<td>47.60</td>
</tr>
</tbody>
</table>

Note.  CHISQ = 7.10  DF = 2  PROB > CHISQ = 0.0287
### Table 8

Wilcoxon Test between Decided/Undecided on Locus of Control.

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>SD under H0</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>24</td>
<td>58.67</td>
<td>27.9</td>
</tr>
<tr>
<td>Undecided</td>
<td>31</td>
<td>58.67</td>
<td>28.08</td>
</tr>
</tbody>
</table>

**Note.** $Z = -0.0341$  PROB > $Z = 0.9728$

### Table 9

Wilcoxon Test between Decided/Indecisive on Locus of Control.

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>SD under H0</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>24</td>
<td>26.35</td>
<td>14.73</td>
</tr>
<tr>
<td>Indecisive</td>
<td>10</td>
<td>26.35</td>
<td>24.15</td>
</tr>
</tbody>
</table>

**Note.** $Z = 2.5043$  PROB > $Z = 0.0123$

### Table 10

Wilcoxon Test between Undecided/Indecisive on Locus of Control.

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>SD under H0</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undecided</td>
<td>31</td>
<td>32.77</td>
<td>18.44</td>
</tr>
<tr>
<td>Indecisive</td>
<td>10</td>
<td>32.77</td>
<td>28.95</td>
</tr>
</tbody>
</table>

**Note.** $Z = 2.4108$  PROB > $Z = 0.0159$

Wilcoxon tests have continuity correction = .5
Table 11

Kruskal-Wallis Test on Vocational Information Seeking Behavior.

<table>
<thead>
<tr>
<th>Level</th>
<th>n</th>
<th>SD under HO</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decided</td>
<td>24</td>
<td>73.53</td>
<td>38.58</td>
</tr>
<tr>
<td>Undecided</td>
<td>31</td>
<td>76.10</td>
<td>29.18</td>
</tr>
<tr>
<td>Indecisive</td>
<td>10</td>
<td>54.98</td>
<td>31.45</td>
</tr>
</tbody>
</table>

*Note.* CHISQ = 3.43  DF = 2  PROB > CHISQ = 0.1800
Table 12
Wilcoxon Tests by Sex on Measures of Career Indecision, Locus of Control, and Trait Anxiety.

<table>
<thead>
<tr>
<th></th>
<th>Female n=48</th>
<th>SD under HO</th>
<th>Male n=17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td></td>
<td>M</td>
</tr>
<tr>
<td>a) CDS-I</td>
<td>31.25</td>
<td>66.88</td>
<td>37.94</td>
</tr>
<tr>
<td>b) I-E</td>
<td>33.24</td>
<td>66.76</td>
<td>32.32</td>
</tr>
<tr>
<td>c) STAI-Y2</td>
<td>36.09</td>
<td>66.89</td>
<td>24.26</td>
</tr>
</tbody>
</table>

Note. Normal Approximation with Continuity Correction .5

CDS-I: Career Decision Scale - Indecision
I-E: Internal-External Scale
STAI-Y2: Trait Anxiety Scale

a) $z = 1.2485$ PROB > $z = 0.2119$
b) $z = -0.8691$ PROB > $z = 0.8691$
c) $z = -2.2125$ PROB > $z = 0.0269$
Table 13

Correlations of Locus of Control with Vocational Information Seeking Behavior (VISB), Trait Anxiety with VISB, and Trait Anxiety with Locus of Control.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total N = 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-E with VC</td>
<td>.04</td>
</tr>
<tr>
<td>STAI-Y2 with VC</td>
<td>.11</td>
</tr>
<tr>
<td>STAI-Y2 with I-E</td>
<td>.43</td>
</tr>
</tbody>
</table>

Note. VC = Vocational Checklist, measure of vocational information seeking behavior (VISB)
I-E= Internal-External Scale, measure of locus of control
STAI-Y2 = Trait Anxiety Scale, measure of trait anxiety.
Figure 1
Figure 1
Frequency Plot of Declared and Undeclared Scores on the Career Decision Scale – Certainty Scale.
Appendix A

LETTER TO SUBJECTS
Appendix A

Letter to Subjects

Hello! I am a graduate student in Student Affairs/ Counseling Psychology. I am also the Career Exploration Associate for the Olentangy Area Residence Halls. Since last June, I have been working on my Master's thesis research project. My research is about major/career decision making in first year college students. So, because you were a first quarter freshman in University College, Autumn quarter, 1988, you have been selected as a potential participant in this research.

I would be very appreciative if you would give just an hour of your time to complete four questionnaires asking a variety of things about your perceptions of yourself and how or if you have been exploring educational/career options. The results may suggest ways to improve advising and career counseling of first year students. Your participation is completely voluntary, the information that I gather is confidential, and you may choose to stop your involvement in the study at any time.

I may give you a call during the next few weeks to see if you would be willing to help me in my research. You will not be pressured to participate. There will be many times available for testing sessions in Morrill Tower; you may attend the one most convenient for you. I will provide refreshments at all sessions. You may keep the OSU pencil I provide for you as a reminder that you helped a fellow student achieve an important academic and personal goal. You will be given the opportunity to meet with me at a later date to discuss your results and/or the results of the study.

This project has been approved by the Ohio State University Human Subjects Committee, and by University College. Again, I would be very grateful for your help in this important research.
Appendix B

PHONE CONTACT SCRIPT
Appendix B

Phone Contact Script

Hello. This is Judy Michael. I am a graduate student in Student Affairs and I am working on my master's thesis. A few weeks ago I sent letters to students asking for their participation in my research study. Did you receive a letter? (If no, ask if is first year student, explain study; if yes, ask if s/he remembers what it was about, explain briefly -- four questionnaires asking a variety of things about your perceptions of yourself and how or if you have been exploring educational/career options). I have scheduled a lot of different times for the testing sessions in the next week or so, to be held in 437 Morrill Tower. It only takes an hour to participate, I provide pop and cookies, and you will have the opportunity to learn about your results and/or the results of the study later. So, would you be able to help me out by participating in this study? Are you a first year student and did you enter UVC in fall, 1988?

If the response is no, thank them anyway.

If yes, tell them the dates available, ask what date and time would be most convenient. In some cases, offer to deliver the folder and pick it up or have the student return it. Remind the student that participation is voluntary and s/he may discontinue participation at any time. Schedule a testing time, take the student's name, give them your name and phone number. Tell them where to go for the testing session.

End the conversation by saying:
I really appreciate your help. I would be grateful if you would call me if you need to reschedule your testing time. Do you have any questions? Are you sure of where to go? Do you have my name and number, and the date and time of your testing session? Thank you again very much.
Appendix C

TEST FOLDER INTRODUCTION AND INSTRUCTIONS
Appendix C
Test Folder Introduction and Instructions

Thank you for attending this session and for your interest in participating in this study. Your help is greatly appreciated. The purpose of this research is to better understand educational/career indecision in first year students. I will be studying differences between students in a CAP area and students in GBC on four inventories. These inventories are:
1) The Career Decision Scale
2) The Rotter Internal/External Scale
3) The Vocational Behavior Checklist
4) The Self-Evaluation Questionnaire (Form Y-1 and Form Y-2)

It will take about one hour for you to complete these inventories. The results of this research may be useful to career counselors, advisors in UVC, and others working with or conducting research with first year students.

I am now going to pass out "Consent to Participate" forms. As I have explained to you in the letter and on the phone, your participation is voluntary. Please read the "Consent to Participate" form, and if you would like to continue with your participation, sign both copies, keeping one and giving the other to me now. You may ask any questions about this form now or at any time, and are free to discontinue your participation at any time. Your participation and results are confidential. You may elect to discuss your results with me after the study is completed by filling out your name and phone number on the form I will hand out now. I would contact you to make an appointment during Spring quarter.

I will now give you instructions on each of the four inventories and answer any questions that you have about these instructions. Please re-read the instructions of each inventory before completing each one. It is important to the success of the study that you read and follow these instructions. Please raise your hand if you have a question as you complete the inventories.

Please complete the four inventories in the order that they are given. It will take about an hour to complete the inventories, without rushing and yet without spending too much time over any one question. Answer all questions (do not leave blanks) and use the #2 pencil provided when filling out the forms. If you are requesting feedback, place the feedback request form with your name and phone number, on top of your completed inventories.

Again, thank you for your time and cooperation. You may now begin reading the instructions for the first inventory and filling it out, and continue until finished with all four inventories.
Appendix D

PARTICIPANT CONSENT FORM
CONSENT FOR PARTICIPATION IN
SOCIAL AND BEHAVIORAL RESEARCH

I consent to participating in (or my child's participation in) research entitled:

An Exploration of Relationships Among Career Indecision,

Locus of Control, and Information Seeking Behavior in Declared Major

and Undeclared Major First Year College Students.

Robert F. Rodgers_______ or his/her authorized representative has
(Principal Investigator)

explained the purpose of the study, the procedures to be followed, and the expected duration of my (my child's) participation. Possible benefits of the study have been described as have alternative procedures, if such procedures are applicable and available.

I acknowledge that I have had the opportunity to obtain additional information regarding the study and that any questions I have raised have been answered to my full satisfaction. Further, I understand that I am (my child is) free to withdraw consent at any time and to discontinue participation in the study without prejudice to me (my child).

Finally, I acknowledge that I have read and fully understand the consent form.

I sign it freely and voluntarily. A copy has been given to me.

Dates: ____________________ Signed: ______________ (Participant)

Signed: Robert Rodgers_______ Signed: ____________________
(Principal Investigator or his/her Authorized Representative) (Person Authorized to Consent for Participant - If Required)

Witness: ____________________

BS-027 (Rev. 3/87) —(To be used only in connection with social and behavioral research.)
Appendix E

DEMOGRAPHIC DATA FORM
Appendix E

Demographic Data Form

Please fill out the top portion of this form. Do not fill out the portion below the solid line with your name, address, and phone number unless you want to be contacted to receive feedback about your results and/or the results of the study.

AGE: __________  SEX: (circle one) F  M

CAP AREA or GBC: __________

If you would like to be contacted later to obtain information about your results or the results of this study, please fill out the information below.

Name: _______________________

Address: _______________________

(local)

____________________________

____________________________

Phone: ________________________

I would like to be contacted to obtain information about:
(Check the response(s) that apply)

_____ My scores/results on the inventories

_____ The overall results of this research project.
Appendix F

VOCATIONAL CHECKLIST
VOCATIONAL CHECKLIST


Listed below are some things that you may have actually done in order to help you select a college major or career. Please check (x) the degree of frequency (from never through very frequently) that you have actually performed these tasks during the last six months:

Example: How many times over the last six months have I:

Very
Never: 1 : 2 : 3 : 4 : 5 : Frequently

1. Sought out specific vocational information. _____:____:____:____:____:____:

The above example indicates that the person has sought out specific vocational information at least once within the last six months.

Please be as honest as you can, there is no need to "pad" your responses. This checklist will help us identify areas that you may not have thought about and that may help you in finding a suitable college major or a career. Please do not skip any items and work as rapidly as possible.

If there are some things that you have done that are not listed here, feel free to add them at the end of this checklist and mark each additional item as did the others.

How many times over the last six months have I:

0 Degrees of Frequency

Never: 1 : 2 : 3 : 4 : 5 : Frequently:

1. Read or talked about the hours (credits) needed for a particular major. _____:____:____:____:____:____:

2. Sought information concerning chances for advancement in given occupations. _____:____:____:____:____:____:

3. Sought information concerning the supply and demand of various careers. _____:____:____:____:____:____:

4. Discussed with a parent my choice or various choices _____:____:____:____:____:____:
How many times over the last six months have I:

Degrees of frequency
Never: 1: 2: 3: 4: 5: Frequently:

5. Discussed with other relatives my choice or various choices.
   
6. Sought a part-time job while at school in an area in which I might like to make a career.
   
7. Discussed possible vocational choices with a counselor.
   
8. Discussed possible career choices with a teacher.
   
9. Discussed possible career choices with a friend.
   
10. Discussed possible career choices with an academic advisor.
    
11. Found people in a given career and obtained information related to that type of work.
    
12. Written to an agency for pamphlets, catalogues, or information related to a given occupation.
    
13. Read a book, magazine article, or other material about occupations.
    
14. Written other educational institutions that offer training more appropriate to my possible career choices.
15. Visited or make definite plans to visit schools or places of employment that are related to possible career choices.

16. Viewed TV programs, exhibits, or shows or listened to radio programs about various occupations or training facilities.

17. Gathered information concerning the extent to which technological change might effect various career choices.

18. Tried to communicate to others my vocational abilities, interests, and plans, orally or in writing.

19. Participated in clubs or interest groups for the purpose of exploring different career fields.

20. Looked up information about possible college majors in college catalogues.

21. Sought information about non-college technical training programs.

22. Talked with other students about possible majors.

23. Sought information about careers from the State Employment Office.

24. Registered at the Counseling Center to take tests (tests not previously taken) in order to further clarify my interests and aptitudes.
Appendix G

ROTTER INTERNAL-EXTERNAL SCALE
Rotter J-E Scale  (Rotter, J.B., 1966)

This is a questionnaire to find out the way in which certain events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you're concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief; obviously there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. Be sure to find an answer for every choice. Circle your choice of the "a" or "b" statement you believe is more true.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you're concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

REMEMBER: Select the alternative which you personally believe to be more true.

I more strongly believe that:

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run, people get the respect they deserve in this world.
   b. Unfortunately, the individual's worth often passes unrecognized no matter how hard he tries.
5. a. The idea that teachers are unfair to students is nonsense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks, one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try, some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they are like.

9. a. I have often found what is going to happen will happen.
   b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.

10. a. In the case of the well-prepared student, there is rarely, if ever, such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work; luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in government decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyway.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.

15. a. In my case, getting what I want has little or nothing to do with luck.
    b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be boss often depends on who was lucky enough to be in the right place.
    b. Getting people to do the right thing depends on ability; luck has little or nothing to do with it.
17. a. As far as world affairs are concerned; most of us are
   the victims of forces we can neither understand nor control.
   b. By taking an active part in political and social
      affairs, the people can control world events.

18. a. Most people don't realize the extent to which their
    lives are controlled by accidental happenings.
   b. There really is no such thing as "luck."

19. a. One should always be willing to admit his mistakes.
   b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
   b. How many friends you have depends upon how nice a
      person you are.

21. a. In the long run, the bad things that happen to us
    are balanced by the good things.
   b. Most misfortunes are the result of lack of ability,
      ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
   b. It is difficult for people to have much control over
      the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at
    the grades they give.
   b. There is a direct connection between how hard I study
      and the grade I get.

24. a. A good leader expects people to decide for themselves
    what they should do.
   b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over
    the things that happen to me.
   b. It is impossible for me to believe that chance or
      luck plays an important role in my life.

26. a. People are lonely because they don't try to be friendly.
   b. There's not much use in trying too hard to please people;
      if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over
      the direction my life is taking.

29. a. Most of the time I can't understand why politicians
    behave the way they do.
   b. In the long run, the people are responsible for bad
      government on a national as well as on a local level.
Appendix H

CAREER DECISION SCALE
CAREER DECISION SCALE
THIRD REVISION (1976)
by Samuel H. Osipow, Claude G. Carney, Jane Winer, Barbara Yanco, and Marjorie Koscher

NAME ____________________________
DATE OF BIRTH ____________________ AGE __________________
CLASS/GRADE ______________________ SEX ____________________

This questionnaire contains some statements that people commonly make about their educational and occupational plans. Some of the statements may apply to you, others may not. Please read through them and indicate how closely each item describes you in your thinking about a career or an educational choice by marking the appropriate number on the answer sheet. An example is given below.

Exactly like me Very much like me Only slightly like me Not at all like me
I am excited about graduating and going to work. 4 3 2 1

If you are excited about going to work and feel no hesitation about it you would circle "4" to indicate that the description is exactly the way you feel. If the item is very close, but not exactly the way you feel—for example, you’re generally excited about going to work after you graduate, but are experiencing some minor concerns about it—you would circle the number "3." You would circle "2" if the item describes you in some ways, but in general it is more unlike than like your feelings; for example, if you are generally more concerned than excited about work after graduation. Finally, you would circle "1" if the item does not describe your feelings at all; that is, you are experiencing a great deal of concern and no excitement about graduation and work.

Please be sure to give only one response to each item and answer every item.

PAR
Psychological Assessment Resources, Inc.
PO Box 586
Oceanside, New York 11570

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This form is printed in green ink on gray paper. Any other version is unauthorized.
1. I have decided on a career and feel comfortable with it. I also know how to go about implementing my choice.

2. I have decided on a major and feel comfortable with it. I also know how to go about implementing my choice.

3. If I had the skills or the opportunity, I know I would be a ________ but this choice is really not possible for me. I haven't given much consideration to any other alternatives, however.

4. Several careers have equal appeal to me. I'm having a difficult time deciding among them.

5. I know I will have to go to work eventually, but none of the careers I know about appeal to me.

6. I'd like to be a ___________________________, but I'd be going against the wishes of someone who is important to me if I did so. Because of this, it's difficult for me to make a career decision right now. I hope I can find a way to please them and myself.

7. Until now, I haven't given much thought to choosing a career. I feel lost when I think about it because I haven't had many experiences making decisions on my own and I don't have enough information to make a career decision right now.

8. I feel discouraged because everything about choosing a career seems so "dry" and uncertain; I feel discouraged, so much so that I'd like to put off making a decision for the time being.

9. I thought I knew what I wanted for a career, but recently I found out that it wouldn't be possible for me to pursue it. Now I've got to start looking for other possible careers.

10. I want to be absolutely certain that my career choice is the "right" one, but none of the careers I know about seem ideal for me.

11. Having to make a career decision bothers me. I'd like to make a decision quickly and get it over with. I wish I could take a test that would tell me what kind of career I should pursue.

12. I know what I'd like to major in, but I don't know what careers it can lead to that would satisfy me.
REMEMBER - 4 is exactly like me, 3 is very much like me, 2 is only slightly like me, and 1 is not at all like me.

13. I can’t make a career choice right now because I don’t know what my abilities are.  
   Circle Answer  
   Like Me  Not Like Me  
   4 3 2 1

14. I don’t know what my interests are. A few things “turn me on” but I’m not certain that they are related in any way to my career possibilities.  
   4 3 2 1

15. So many things interest me and I know I have the ability to do well regardless of what career I choose. It’s hard for me to find just one thing that I would want as a career.  
   4 3 2 1

16. I have decided on a career, but I’m not certain how to go about implementing my choice. What do I need to become anyway?  
   4 3 2 1

17. I need more information about what different occupations are like before I can make a career decision.  
   4 3 2 1

18. I think I know what to major in, but I feel I need some additional support for it as a choice for myself.  
   4 3 2 1

19. None of the above items describe me. The following would describe me better. (Write your response below):  
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

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<thead>
<tr>
<th></th>
<th>Total 1-2</th>
<th>Total 3-18</th>
<th>Normative Group</th>
<th>%ile</th>
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Appendix I

SELF-EVALUATION QUESTIONNAIRE
## SELF-EVALUATION QUESTIONNAIRE

Developed by Charles D. Spielberger
in collaboration with

**STAI Form Y-1**

<table>
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<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Age</td>
<td>Sex: M</td>
<td>F</td>
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**DIRECTIONS:** A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

**Regarding your decisions about major issues or goals, how do you feel?**

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**Consulting Psychologists Press**

577 College Avenue, Palo Alto, California 94306
**SELF-EVALUATION QUESTIONNAIRE**

**STA 1 Form Y-2**

Name __________________________ Date __________________________

DIRECTIONS: A number of statements which people have used to describe themselves are given below. Read each statement and then blacken in the appropriate circle to the right of the statement to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

<table>
<thead>
<tr>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>21. I feel pleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. I feel nervous and restless</td>
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<td></td>
<td></td>
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<tr>
<td>23. I feel satisfied with myself</td>
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<tr>
<td>24. I wish I could be as happy as others seem to be</td>
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<tr>
<td>25. I feel like a failure</td>
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<tr>
<td>26. I feel rested</td>
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<td></td>
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<tr>
<td>27. I am &quot;calm, cool, and collected&quot;</td>
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<td></td>
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<tr>
<td>28. I feel that difficulties are piling up so that I cannot overcome them</td>
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<td></td>
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<tr>
<td>29. I worry too much over something that really doesn't matter</td>
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<tr>
<td>30. I am happy</td>
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<td>31. I have disturbing thoughts</td>
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<td>32. I lack self-confidence</td>
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<tr>
<td>33. I feel secure</td>
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<tr>
<td>34. I make decisions easily</td>
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<td></td>
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<tr>
<td>35. I feel inadequate</td>
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<td></td>
</tr>
<tr>
<td>36. I am content</td>
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<tr>
<td>37. Some unimportant thought runs through my mind and bothers me</td>
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<tr>
<td>38. I take disappointments so keenly that I can't put them out of my mind</td>
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<tr>
<td>39. I am a steady person</td>
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<tr>
<td>40. I get in a state of tension or turmoil as I think over my recent concerns and interests</td>
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</tr>
</tbody>
</table>

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