AN ANALYSIS OF THE RELATIONSHIP OF EMPLOYMENT OUTCOMES TO DEVELOPMENTAL VARIABLES AND JOB SEARCH STRATEGIES OF COLLEGE GRADUATES

By

PAMELA J. BOWERS

Bachelor of Science
Oklahoma State University
Stillwater, Oklahoma
1979

Master of Science
Oklahoma State University
Stillwater, Oklahoma
1981

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Thesis Approved:

Thesis Advisor

Thomas C. Collins

Dean of the Graduate College

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CHAPTER I

INTRODUCTION

The issue of employment of higher education graduates is gaining more attention as students continue to focus on career goals as a motivation to earn a degree (Astin, 1993; Boyer, 1987; Pascarella & Terenzini, 1991) and as colleges face increasing demands to be accountable concerning the educational outcomes of graduates (U.S. Department of Education, 1988). College students in the United States are becoming more focused on employment achievements as expected outcomes of their college experience, indicating that a "very important" reason for attending college is "to be able to make more money" or "to get a better job" (Astin, Korn & Riggs, 1993, p. 2). The financial investment of students is also increasing, as freshmen are using loans in greater numbers than ever before to pay for college expenses. More students are indicating interest in obtaining graduate degrees, perhaps to "give them a competitive edge in their quest for job and financial security" (Astin, Korn & Riggs, 1993, p. 3). Chandler (1990) refers to the consistent indications that students come to college primarily to get the credentials they need for career success as the "rampant vocationalism of the last twenty years" (p. 14).

The current higher education environment in the United States is such that institutions seem to be strengthening efforts to understand and act on students' concerns, in order to attract and retain students and to provide the accountability demanded of the institutions. Due to the increasing costs of higher education and to increasing competition among institutions for students and the dollars they bring to shrinking higher education

budgets, colleges and universities are becoming more consumer-oriented and concerned with the satisfaction levels of their students. Meeting the expectations students have about their college experience and related career goals has become a major concern for institutions (National Association of College and University Business Officers, 1992). External groups have also strengthened calls for increased accountability from colleges and universities. These calls have led to the establishment of accreditation standards and state mandates for assessment requiring that the value of programs and services be demonstrated (U.S. Department of Education, 1988).

In order to examine most effectively the issue of employment outcomes of college graduates, it is necessary to look at the process of career planning and development during college as well as to study the academic outcomes of the graduating senior, which have been the primary focus of outcomes assessment. Students are encouraged to declare an academic major when they enroll as new freshmen. Many students, even those who indicate a high degree of certainty about their initial major choice when they enter college, change their major before they graduate (Gordon, 1981; Titley & Titley, 1980). The growing concern about employment outcomes adds to existing pressures on students to make career decisions early in the college experience that will help bring about desired outcomes. These pressures may be imposed on students by themselves or by their families (Upcraft, Finney, & Garland, 1984), by the financial implications (Astin, Korn & Riggs, 1993) of changing majors within an academic system where such action may result in additional time and expense to complete a degree (Study Group on the Conditions of Excellence in American Higher Education, 1984), and by a campus social system in which

one is primarily identified through affiliation with an academic program (Titley & Titley, 1980).

These indications that major choice and other career related issues are a central concern for college students are not surprising from the perspective of college student development theory. Theorists indicate that identity issues are a primary developmental focus for traditional age college students and are closely tied to career concerns (Chickering, 1969; Chickering & Reisser, 1993). Chickering (1969) theorized that several related developmental tasks must be resolved before students can deal effectively with career planning issues. Super (1983) also described developmental issues that must be resolved before career maturity, or readiness to clarify or implement a career direction, is reached. The implications go beyond immediate employment outcomes. Heath (1976) suggested that assessments of the maturity level of students during their college years can be used effectively to predict their vocational adaptation more than ten years after college graduation.

Higher education institutions are concerned about graduates getting good jobs because it is an outcome expected by students, it contributes to a positive image of the institution, and it can help provide accountability for institutional programs. This increase in institutional interest in the employment outcomes of college graduates indicates the need to better understand the factors involved in the process. Studies of educational outcomes at colleges and universities have often focused primarily on the academic achievements of students, and the content of the academic program they have completed (Study Group on the Conditions of Excellence in American Higher Education, 1984).

While these are important issues, "gone are the days when a 4.0 grade point average and a college degree guaranteed a job to America's graduates" ("Good grades," 1995, p. N4). As this statement illustrates, and contrary to the expectations of many students and their parents, a college degree is not a guarantee of employment (Borgen, Hatch & Amundson, 1990; Greenwald, 1993). When students' expectations about employment outcomes are not reasonably met, the dissatisfaction affects the graduates and the institution.

Students, parents, and others interested in the employment outcomes of students generally understand that several variables may interact to affect the employment of an individual, such as grade point average, major, and the market demand of the specific occupational area in which the graduate seeks employment. What may not be as easily apparent is that the developmental maturity of a student may affect the student's ability to conduct an effective job search and may be a factor in a prospective employer's assessment of his/her attractiveness as a candidate for employment (Ellis & Taylor, 1983). The popular media reflects the growing idea that major and grades are less important than the ability to think and to interact effectively with others. In an article in Fortune magazine describing what employers are seeking in new college graduates, Smith (1994) provided quotes from an interview with Lew Shumaker, manager of college relations for DuPont, who said that "there seems to be little correlation between grades and job performance" and that "we are looking for graduates who have shown that they value those who are different from themselves" (p. 59).

If developmental factors play a significant role in the job search strategies and employment outcomes of college graduates, assessment of these factors should be

included in evaluation of educational outcomes for graduates, specifically employment outcomes. Many areas within higher education, including student affairs, are being called upon to demonstrate the value they provide to students (Dickson, 1991; Erwin, 1993). If the mission of student affairs is developmental rather than operational, there is a need to assess the effectiveness of programs and services. In addition to demonstrating the value of student affairs programs and services, assessment which focuses on the development of college students is important in helping expand understanding of the nature of how student affairs contributes to students' education (Erwin, 1993).

Erwin (1993) suggested that higher education must assume a stronger and more credible role in its own evaluation, or others outside of higher education would likely take on that role. The Involvement in Learning Task Force (Study Group on the Conditions of Excellence in American Higher Education, 1984) stated that measurements of educational outcomes should be expanded to include both academic and student growth outcomes:

> "Adequate measures of educational excellence must thus be couched in terms of student outcomes--principally such academic outcomes as knowledge, intellectual capacities, and skills. Outcomes also may include other dimensions of student growth, such as self-confidence, persistence, leadership, empathy, social responsibility, and understanding of cultural and intellectual differences" (p. 16).

To summarize, the interests and expectations of students are becoming more focused on employment outcomes, which increases the importance of career development activities throughout the undergraduate experience. Colleges are becoming more concerned with accountability, student satisfaction, and meeting the expectations of students, and, therefore, must also be concerned about the employment outcomes of

graduates. Outcomes assessment has focused primarily on evaluation of the academic preparation of the students, and employment outcomes are connected logically to the quality of the academic program and the achievement level of the student. Developmental theory suggests that there may be other factors that influence the employment outcomes, both immediate and long-term, of college graduates. To consider thoroughly the impact of the college experience on the job search strategies and the employment outcomes for students, evaluation or assessment of these outcomes must include developmental as well as academic components.

Need for the Study

The trend for students to be more concerned about employment outcomes increases the already considerable pressure on them to make career decisions, including choosing a major and identifying with an academic department as early in the college experience as possible (Titley & Titley, 1980). The academic structure often requires students to declare a major or at least an area of interest upon entry into the college system. Family influences and social pressures in the form of a campus culture in which students are identified with their major area of study may add to the pressure to make career decisions early, possibly before reaching a developmental readiness to do so. Academic requirements have moved toward increased specialization by major, which means that changing majors may result in students having earned credits for courses that will not be accepted in meeting requirements in a new degree program (Study Group on the Conditions of Excellence in American Higher Education, 1984; Titley & Titley, 1980). Students may hesitate to make changes if they perceive the changes as resulting in lost

money, lost time, or wasted effort. Changing majors may be perceived as a larger problem if students have significant education related financial obligations, which are becoming more common as students rely more on loans to finance college expenses (Astin, Korn & Riggs, 1993).

Given the desire of individual students to choose a major that promises positive employment outcomes, the institutional and social system pressures to make career decisions early, the developmental growth that must occur before students are ready to make effective career decisions, and highly structured academic requirements, the likelihood increases that students' early career decisions will be poor career decisions. However, students may feel locked-in to these decisions in order to graduate without spending more time and more money. This may inhibit their participation in career exploration and other activities that could enhance development of career maturity and other personal growth areas related to career issues (Gordon & Kline, 1989). Once the career/major choice is made, students may not feel the need to explore options or to examine closely the relationship between career choices, personality, and life style preferences. Instead, they may base their career choices on the attractiveness of salary, occupational demand, and the perceived need to get through the program as soon as possible (Upcraft, Finney, & Garland, 1984).

Universities are under increasing demands for accountability for the content of academic programs or the quality of the degree. They also are under pressure to accept more responsibility for the employment of their students, to provide more practical help to students in obtaining employment, and to assure employers of the adequate preparation of

their graduates. The focus of evaluation or educational outcomes assessment primarily has been on the academic factors involved, such as program content and academic achievement of students (U.S. Department of Education, 1988). While the issue of adequate academic preparation is relevant, other issues that may affect the employment of graduates should also be considered (Dickson, 1991; Erwin, 1993; Study Group on the Conditions of Excellence in American Higher Education, 1984). If developmental levels play a significant role in the employment outcomes of graduates, providing appropriate career development programs will become even more important in the next few years, based on predicted employment trends.

Imel (1994b) estimates that between 1994 and 2005, 30 percent of new graduates will be unemployed or under-employed, as compared to an average 20 percent "underutilization" (Greenwald, 1993) of graduates during the 1984-1990 period. As a result of a study on the experience of unemployment for university graduates, Borgen, Hatch and Amundson (1990) suggested that career development programs for college students should address environmental factors that may limit opportunities to obtain satisfactory employment and should help students develop skills needed for a prolonged job search. It seems appropriate, therefore, to examine the nature of the relationship among employment outcomes of graduating seniors to their developmental maturity, career planning and job search activities, and academic performance, while recognizing the influence of the job market supply and demand on immediate employment outcomes for new graduates. Examining how these variables are related to employment outcomes may provide insight into developing more effective career development interventions.

If developmental outcomes are demonstrated to play an important role in the job search strategies and employment outcomes of college graduates, there are implications for the current educational environment. The structure and culture of colleges typically emphasizes the need to have career decisions made, rather than the importance of learning the process of making career decisions. The current system may not address adequately the need to consider the developmental readiness of college students to make career decisions and the developmental process required to achieve readiness. It also may not consider the campus system's influence on the career development process. Petitpas (1978) suggested that, if the students could be provided with a campus environment within which the pressure for an occupational identity were not so great, it would probably promote their career development because they would likely feel more freedom to explore career options. Hurst (1987) suggested that making the campus environment, rather than the students, the target of interventions may be more appropriate. He and others who advocate implementing an ecological perspective in student affairs work (Banning & Kaiser, 1974; Sullivan, 1987) proposed that changing the campus system to facilitate student development is often appropriate, rather than always assuming the problem is within the students and that they should adjust to the environment.

Purpose of the Study

The purpose of this study is to examine the employment outcomes of graduating seniors and to consider the relationship of those outcomes to students' psychosocial development and their engagement in career planning and job search activities.

Statement of the Problem

Students graduate with individual variability in personal characteristics, such as academic credentials and psychosocial development. Each individual graduate possesses a unique combination of degree obtained, grade point average, academic major, developmental maturity, and other personal characteristics. Most graduating seniors who do not plan to enter graduate or professional school immediately have apparent intentions to seek employment in a specified career field. However, students operationalize these intentions into job search actions with varying degrees of intensity and through a variety of behaviors (Schwab, Rynes, & Aldag, 1987).

Developmental theory suggests that students must resolve certain developmental issues before they can make and implement effective career decisions (Chickering, 1969; Chickering & Reisser, 1993; Erikson, 1968; Super, 1983). Therefore, it is relevant to include developmental assessment as an outcomes measure for graduating seniors and to examine how developmental readiness may impact the implementation of career plans through the job search process and the employment outcomes obtained.

This study will examine the employment outcomes achieved by graduating seniors and will investigate the relationships among these outcomes and characteristics of the students including psychosocial development and the extent of the students' participation in career planning and job search activities. The problem investigated in this study is: Do psychosocial development and career planning and job search behaviors differentiate students who have obtained job offers at the time of graduation from those who have not

obtained offers? Is students involvement in career planning and job search activities related to their psychosocial development?

Definition of Terms

Academic Autonomy Task. This task is operationally defined as the task score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987). This task score indicates the extent to which students can deal with ambiguity and monitor and control their own behavior to meet goals successfully and to fulfill responsibilities, especially as it relates to academic achievements.

Job Search Strategy. This term refers to the breadth and intensity of activities in which the student has engaged throughout the undergraduate experience for the purpose of enhancing the ability to achieve desired employment outcomes following graduation.

College. This term is used to refer to institutions of higher education, in general, regardless of size or structure.

Developing Mature Interpersonal Relationships Task. This task is operationally defined as the task score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987). This task score indicates the extent to which students have developed peer relationships that are characterized by independence, frankness, and trust; appreciate individual differences among friends and acquaintances and are not unduly influenced by pressure to conform to group norms or to conceal opinions that are not in agreement with others; are open to and accepting of people from different cultures, races and backgrounds; and are free from the need for constant reassurance, approval and direction from others.

The Developing Mature Interpersonal Relationships task includes the following subtasks:

Peer Relationships Subtask. Students who have accomplished this subtask indicate greater trust and independence in their relationships with peers and express feeling less of a need to conform to standards of their friends. Relationships reflect more openness and honesty, as well as acceptance and appreciation of individual differences. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Tolerance Subtask. This subtask involves developing an openness to and acceptance of individual differences in culture, ideas, background, beliefs, race, and appearance. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Emotional Autonomy Subtask. Students who have accomplished this subtask do not require continuous approval and reassurance from others; reliance on parents for direction is minimal. Students trust their own ideas and feelings and have the self-confidence to make decisions and express opinions that may differ from their peers. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Developmental Task. This is defined by the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987) as an interrelated set of behaviors and attitudes that cultural norms indicate should occur at a certain chronological point in life, in a specific age group, and within a certain context. Successful resolution of a developmental task

provides the basis for successfully meeting the challenges of future developmental tasks; failure to accomplish meeting the challenges inherent in a specific developmental task may lead to social disapproval and may delay further developmental achievements in that area (Winston & Miller, 1987).

Employment Outcomes. For this study, the employment outcome for a graduate is defined as whether or not the student has received an offer of employment at the time of graduation that is appropriate as a career entry level position.

Establishing and Clarifying Purpose Task. This subtask is operationally defined as the task score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987). The score on this task indicates the extent to which students have well-defined and thoroughly explored career goals and plans; have synthesized knowledge about themselves and the world of work into appropriate career plans, both in terms of emotional commitment and taking action to move toward career goals; have established a personal direction and future plans that take into account values, lifestyle choices, and career objectives; and have structured their lives and are able to use the resources of their environments to meet life's demands effectively (Winston & Miller, 1987).

The Establishing and Clarifying Purpose task includes the following subtasks:

Educational Involvement Subtask. Students who have accomplished this subtask have well-defined educational goals and plans and are knowledgeable about available resources. After careful investigation and self-analysis, they have selected academic programs which suit them intellectually and temperamentally. They are not passive learners, but they take the initiative through personal study projects, attending non-

required lectures and programs, and making contact with faculty and staff members. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Career Planning Subtask. Students who have accomplished this subtask have an awareness of the world of work, an understanding of their limitations and abilities, a knowledge of requirements for various occupations, and an understanding of the emotional and educational demands of different kinds of jobs. Students have synthesized knowledge about themselves and the world of work, enabling them to make a commitment to a career field and to formulate vocational plans. The students have taken steps toward beginning a job search. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Lifestyle Planning Subtask. Students who have accomplished this subtask have established a personal direction in life, based on personal, ethical, and religious values; future family plans; and vocational and educational objectives. Plans are not necessarily specific, but they reflect the establishment of well-thought-out long-range goals. Students who have high achievement in this area are self-aware, can objectively analyze their own behaviors, attitudes and beliefs, and exhibit the capacity to follow through on personal plans and commitments. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Life Management Subtask. Students who have accomplished this subtask demonstrate an ability to structure their lives and manipulate their environment to allow them to satisfy daily needs and meet responsibilities without extensive direction or support

from others. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Cultural Participation Subtask. Students who have accomplished this subtask are actively involved in a wide variety of activities, including traditional cultural events such as attending plays, ballets, museums, and art exhibits. They exhibit a variety of cultural interests and a developed sense of aesthetic appreciation. This subtask is operationally defined as the subtask score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Grade Point Average. This is the average of a student's grades for all classes completed in a bachelor's degree program. It is the sum of the grade points earned for each credit hour completed, divided by the number of credit hours attempted. A four point scale is used in which an A is equal to 4.00 points; B is equal to 3.00 points; C is equal to 2.00 points; D is equal to 1.00 point; and F is equal to 0.00 points.

Graduates. The term graduates is used to indicate individuals who have satisfactorily completed the academic requirements for a bachelor's degree and have been awarded the degree by an institution of higher education.

Major. This term refers to the academic field of study to which the student has committed or in which the bachelor's degree is completed.

Psychosocial Development. This term is used to describe the advancement of self-knowledge and interpersonal skills of college students, as a parallel concern to their academic development. Students' involvement with teachers, peers, student leaders, students from diverse cultures, and exposure to the climate of the college environment

affects the way students think about themselves and the world. It affects their self-confidence and desire to give to others, as well as their sense of personal identity and maturity (Winston & Miller, 1987). Operationally for this study, psychosocial development is defined as the scores on developmental tasks and scales on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987).

Salubrious Lifestyle Scale. Salubrious Lifestyle is operationally defined as the scale score on the Student Developmental Task and Lifestyle Inventory (Winston & Miller, 1987). This scale measures the degree to which a student's lifestyle promotes good health and wellness practices, especially related to diet, weight, sleep, exercise, and managing stress.

Traditional Age College Students. For this study, this group is defined as college students ages 17-24. The SDTLI (Winston & Miller, 1987) was developed for use with this age group. Chickering's (1969) vector theory of student development is also based on this age group.

Assumptions and Limitations

1. Each subject has volunteered to participate in the study and has accepted the contractual terms without coercion and of their own free will.

2. The investigation is limited by the fact that the subjects are volunteers and may not be truly representative of all students graduating from the university.

3. The results of the study are limited to this specific institution and should be generalized cautiously.

4. Variables not included in the study may be responsible for employment offers received or not received.

5. Students who are less developmentally mature may be more likely to leave college prior to graduation (Pascarella & Terenzini, 1991).

Significance of the Study

The study will enable the researcher to determine the nature of the relationship among employment outcomes, psychosocial development, and the career planning and job search activities in which graduating seniors have engaged. The study will identify self-reported participation levels of graduating seniors in career planning and job search activities throughout their undergraduate experience. The results of the study could provide useful information for influencing the undergraduate experience of students in ways that might positively affect the job search processes used by graduating seniors and the employment outcomes of new graduates.

Research Questions

1. What are the structural dimensions of the Career Activities Survey?

2. What are the relationships among dimensions of psychosocial development and dimensions of involvement in career activities?

3. What are the relationships among the dimensions of involvement in career activities and employment status?

4 . What are the relationships among the dimensions of psychosocial development and employment status?

Organization of the Study

Chapter 1 has discussed the perceived importance of employment outcomes to students and higher education institutions, as well as the need for better understanding of

what the variables are that may contribute to employment outcomes. The purpose of this study is to examine the employment outcomes of graduating seniors and to consider the relationship of those outcomes to students' psychosocial developmental and the career planning and job search activities in which students have engaged.

Chapter 2 provides an overview of literature on psychosocial development, career planning, and job search activities related to the subject of the study. Chapter 3 presents a description of the subjects, instrumentation, and research design for this study. Chapter 4 provides the results of the analyses of the data. Chapter 5 presents a discussion based on conclusions drawn from the analyses of the data and provides recommendations for practice and for research.

CHAPTER II

REVIEW OF THE LITERATURE

Career development continues to be an area of great concern for those interested in the well-being, development, satisfaction, and retention of college students. The traditional age college student is generally in the process of transition between adolescence and adulthood. The student must resolve many complex developmental tasks (Chickering, 1969; Chickering & Reisser, 1993), many of which are closely related to career decision making and planning. Cultural and family expectations, the structure of the academic system, and the desire for certain career outcomes often combine in some fashion to "push" the student to choose a major, to prepare for a career, and to get a job upon graduation. The importance of the whole process makes career development one of the primary concerns of college students.

The literature suggests that the intensity with which graduating seniors attend to job search activities and their success in obtaining job offers may be related to their understanding of the job search process, their knowledge about the opportunities that may be available to them in their chosen career field, and their resolution of developmental issues related to identifying and implementing a career plan (Kanfer & Hulin, 1985; Schwab, Rynes, & Aldag, 1987). The literature on job search behaviors indicates that the manner in which students translate their intentions to find a job into action may influence their ability to get a job and the time frame within which they are offered employment opportunities (Imel, 1994a; Kopelman, Rovenpor, & Millsap, 1992; Vinton, 1992) . The degree to which students engage themselves in job search activities such as preparing a

resume, researching prospective employers, and networking with friends and family may reflect their internal readiness to make the transition from talking and thinking about career plans to implementing them (Kopelman, Rovenpor, & Millsap, 1992). Chickering (1969) and Super (1990) suggested that successful resolution of certain developmental tasks would be necessary before this readiness would be apparent. Employment outcomes of college graduates are also affected by variables outside the influence of the graduate, such as the job market for candidates in their preferred occupational area (Bureau of Labor Statistics, 1994; Schwab, Rynes & Aldag, 1987).

This review will encompass literature that examines, discusses, and connects the research on psychosocial development, college student development, career development, and career planning and job search activities. These topics will be considered as variables that may be related to the employment outcomes of college graduates.

Psychosocial Development

Psychosocial theories of human development consider the external environment as a social context that influences the internal dynamics of the individual, recognizing that interaction with family, social institutions, and culture affect development (Knefelkamp, Widick & Parker, 1978). Theorists describe developmental issues or tasks related to life events that occur throughout the life span, as well as individual patterns of responses and adaptations to events. Using the life stage concept, theorists describe certain developmental characteristics that seem to emerge at predictable times and are common to everyone (Erikson, 1963; Havighurst, 1953). Havighurst (1953) defined a developmental task as one that "arises at or about a certain period in the life of an individual, successful

achievement of which leads to happiness and success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks" (p. 2). Developmental stages emerge as biological and psychological changes within the individual converge with environmental demands brought to bear by the norms and role expectations of the culture (Rodgers, 1991).

Erikson (1963, 1968, 1980) described eight developmental stages that emerge as part of an underlying structure throughout the life span. Each stage in Erikson's (1963) theory has as its focus an issue or task that is qualitatively different from those of other stages. Resolution of the central issue of each stage is conceptualized as one of two opposed outcomes, with successful resolution of each issue adding to the individual's sense of strength or capability to deal with life's struggles. The eight stages of psychosocial development described by Erikson are titled by the polar orientations of each--basic trust vs. mistrust; autonomy vs. shame and doubt; initiative vs. guilt; industry vs. inferiority; identity vs. role confusion; intimacy vs. isolation; generativity vs. stagnation; and integrity vs. despair.

Erikson focused on the emergence of the ego, a selective, integrating "inner agency" (Erikson, 1968, p. 17) which serves to connect the individual's inner life and social roles. A critical component of the ego is identity, "the organized set of images, the sense of self, which expresses who and what we really are" (Widick, Knefelkamp & Parker, 1978, p. 2). Erikson described the developmental stage of identity versus role confusion as the normative developmental "crisis" (Erikson, 1968, p. 17) of adolescence and young adulthood, which would encompass traditional age college students. He

defined "crisis" not as a catastrophe, but as a "crucial moment, when development must move one way or another, marshaling resources of growth, recovery, and further differentiation" (Erikson, 1968, p. 16).

Erikson (1968) emphasized the importance of the relationship between vocational commitments and the resolution of identity issues. The role of the environment in this stage is evident in the pressures inherent in the campus culture and society that push college students to make concrete decisions about the future--forcing the establishment of self-definition. To fit societal norms, college students must establish vocational direction. Erikson (1968) suggested that the failure to resolve the identity task leads to role confusion, in which the individual is unsure of the meaning in life and drifts along without a sense of direction. Successful resolution of the identity versus role confusion stage is seen in the individual's readiness and willingness to meet societal expectations for making personal and vocational commitments.

Marcia (1966) attempted to define the particular characteristics of different ego-identity statuses, representing different styles of coping with the identity task, based on the presence of crisis and commitment in the areas of occupation and ideology. Marcia described *identity-achieved* students as having "seriously considered several occupational choices and made a decision on his own terms" (p. 552). The *identity-diffuse* student is described as exhibiting a lack of commitment as well as a lack of concern about the lack of commitment. He or she may have indicated an occupational choice but does not appear to have a great understanding of the requirements or activities involved in the choice and does not appear to be committed to the choice. The *moratorium* student appears to be in

the process of struggling to make commitments and is very preoccupied with the struggle. Some students, described as *foreclosed*, express a commitment with no indications of a crisis or struggle to reach the commitment. They have apparently conceded to societal or parental pressures and made a commitment before they have worked through the normal developmental process of exploring their needs and values, and they do not see any merit in this exploration. Marcia's (1966) findings suggest that the *achieved-identity* and *moratorium* students are more developmentally mature than the *identity-diffuse* and *foreclosed* students. These findings suggest that different approaches would be needed to encourage student participation in career development programs that involve students in self-exploration and exploration of the world of work.

Psychosocial stage theories of college student development describe where students are, developmentally, and how they progress through developmental changes (Knefelkamp, Widick & Parker, 1978). These theories suggest that a college student develops through a chronological sequence of developmental tasks that focus on predictable concerns. The society and culture that provide the context for the individual, in this case the college campus, have great influence on how the concerns are addressed. Stage (1991) found that many student development theories share a common focus on the individual's change during the college years, especially their struggles to strike a balance between independence and autonomy. Stage reported that most theorists agree on the importance of students feeling challenged within a supportive environment in order to facilitate their personal growth.

Developmental stages or tasks related to the making of vocational decisions and the associated identity concerns are of primary importance during the college years. As young adults, college students are confronted with identity issues that require them to make choices about career and life styles, experiment with various roles, identify their talents, and find meaning in their lives (Rodgers, 1991).

Chickering (1969) elaborated on Erikson's (1963) work concerning resolution of identity issues with his vector model of college student development. In this model, Chickering (1969) considered the development of traditional age college students, specifically, and described and discussed seven vectors and the developmental challenges to be mastered in each. As with Erikson's (1963) stages, the vectors have a sequential pattern, with development in earlier vectors necessary for successful resolution of later tasks. Chickering (1969) described identity formation as the primary developmental concern of college students, stating, "At one level of generalization, all the developmental vectors could be classified under the general heading 'identity formation'" (p. 78).

The first three vectors, Developing Competence, Managing of Emotions, and Developing Autonomy represent understanding one's capabilities, integrating self-control and interdependence, and finding sexual-social expression, as well as realizing that one can be socially and academically competent within the new environment of college life (Rodgers, 1991). Developing Competence specifically involves achieving personal growth in intellectual competence, physical and manual skills, social and interpersonal skills, and, most importantly, a sense of competence, defined as "the confidence one has in his ability to cope with what comes and to achieve successfully what he sets out to do" (Chickering,

1969, p. 9). Managing of Emotions refers to developing an increased awareness of aggressive and sexual impulses and learning appropriate expressions, in terms of time, place, and behavior, of these emotions. Developing Autonomy involves becoming emotionally independent, while moving toward recognizing and accepting interdependence.

Chickering (1969) stated that some development in the first three vectors is necessary for successful resolution of the fourth vector, Establishing Identity. As the individual develops along the first three vectors, he or she will begin to feel capable of coping with internal and external demands and will be ready to face the challenge of determining what is important to cope with--that is, establishing a sense of self. The principal tasks of the fourth vector, Establishing Identity, include accepting and integrating into one's sense of self, one's body and physical appearance, and one's sexuality. Chickering says that development of identity involves "clarification of conceptions concerning physical needs, characteristics, and personal appearance, and clarification of sexual identification, of sex-appropriate roles and behavior" (1969, p. 14).

Integrating a realistic picture of self encourages development in the last three vectors where decisions are required, Freeing Interpersonal Relationships, Establishing Purpose, and Developing Integrity (Chickering, 1969). Having developed a strong sense of identity fosters the development of tolerance for persons different from oneself as well as changing one's capacity for developing and maintaining intimate relationships, the tasks described in the vector Freeing Interpersonal Relationships. Establishing Purpose "requires formulating plans and priorities that integrate avocational and recreational

interests, vocational plans, and life-style considerations," (p. 17) providing the individual with direction and meaning in life. Developing Integrity refers to the process of clarifying one's values and working to achieve behavior that reflects the personalized values held.

Although a central premise of Chickering's (1969) work is that students are not a homogeneous group and will be at different levels developmentally, traditional age students generally progress sequentially through these developmental vectors during their college years. With the central focus of identity development, all seven of the vectors identified by Chickering (1969) are important from the perspective of career development of college students. Chickering's model identifies Establishing Identity and Developing Purpose as tasks that are very closely related to, although not synonymous with, making a vocational choice. College students often make career choices without an accurate assessment of self and other information--which is probably one explanation for the phenomenon of frequent major changes among lower division college students. On the basis of the sequential nature of the developmental vectors described by Chickering, students must have developmental accomplishments along the first three vectors to be adequately prepared to address career and other identity issues.

Career Development

Many developmental theorists (Chickering, 1969; Miller-Tiedeman & Tiedeman, 1993; Super 1983) have considered the overall development of the individual as inseparable from issues of career choice and career development. Weinrach and Srebalus (1990) stated that career related problems often are due to other concerns and assert that "vocational counseling cannot take place apart from educational and personal counseling"

(p. 64). In his discussion of the psychodynamic model of career choice, one of Bordin's (1990) propositions stated that "one source of perplexity and paralysis at career decision points will be found in doubts in and dissatisfactions with current resolutions of self" (p. 117). Many theorists (Chickering, 1969; Miller-Tiedeman & Tiedeman, 1993; Super 1983) recognize the relatedness of career issues to other developmental concerns. Super's (1990) life-span, life-space approach to career development is also helpful in considering the career development concerns of college students from the perspective of a student development paradigm.

Super (1983) described developmental tasks that are necessary for individuals moving through the stage of career exploration and toward establishment of a career direction, which is generally the focus of concern for traditional age college students. Viewing the career development of students from this perspective supports the premise that encompassing career development activities within a focus on overall development would positively affect current career development practices and could be seen as a proactive step to reduce career related and other college student concerns.

From Super's (1990) perspective, the self-concept of an individual is constantly changing throughout the life span, although it becomes increasingly stable following adolescence. He described the process of this change as "a series of life stages characterized by a sequence of growth, exploration, establishment, maintenance and decline" (p. 206). Super defined the process of career development as "essentially that of developing and implementing occupational self-concepts" (p. 207). He proposed that success in coping with the demands of any life-career stage depends on the individual's

career maturity, or readiness to cope. Super (1983) described planfulness as a principal dimension of career maturity or readiness to clarify or implement a career direction. The elements of planfulness are autonomy, time perspective (including reflection on past experiences and anticipation of the future), and self-esteem. He described these traits as "essential to planning, exploration, and the acquisition of career skills and information" (p.558). This suggests that the underlying concerns that prevent the development of these characteristics must be addressed before the individual will be able to make a realistic and satisfying career choice. Traditional age college students, generally in the exploratory stage, must apparently develop these traits before commonly used career counseling interventions would be helpful.

Herr and Cramer (1984) described career choice as a "series of interdependent decisions which are to some extent irreversible and which are intimately tied to the individual's personal history, to personal perceptions of the future, and to both antecedent experiences and future alternatives" (p. 99). Super (1964) illustrated a similar point with the analogy of a knight on a chessboard. He stated, "the knight's moves depend not only on his characteristics, but on the positions and on the actual and possible moves of the other pieces, each with its own characteristics" (p. 4). So the individual's career decisions and career pattern are affected by the personal characteristics of the individual as well as the perceived and real influence of the environment.

The process of career decision making and career development is the focus of considerable attention of student affairs practitioners, academic advisors, faculty, and others. Much of career development work focuses on helping students with the process of

choosing a college major. Gordon (1981) defined vocationally undecided college students as "college age youths who are unready, unwilling, or unable to commit themselves to occupational or educational decisions after high school graduation" (p. 433), and estimates that 22-50% of students are uncommitted to a career direction. Holland and Holland (1977) measured personality, decision making ability, interests, and vocational attitudes of a sample of college juniors and found that identity and vocational maturity appear to be primary differentiators of decided and undecided individuals. They identified a consistent cluster of personal traits, attitudes, and skills of undecided students, including "interpersonal incompetence, lack of self-confidence, anxiety, an unclear and shifting identity, and poor decision making skills" (p. 412). Salomone (1982) recommended counseling approaches to assist indecisive students with career decision making, acknowledging the distinction between indecisive and undecided students.

Although authors' views may vary on the etiology of career indecision among college students, the process of making career decisions is recognized in the literature as an important issue for college students (Crites, 1974; Gordon, 1981; Harman, 1973; Holland & Holland, 1977; Salomone, 1982). Freshmen often indicate interest in knowing about majors where demand and salaries are high, and they may base early major choices on this information without knowing what the chosen career fields are like and what it takes to prepare them for them (Titley & Titley, 1980; Upcraft, Finney, & Garland, 1984). Titley and Titley (1980) indicated that three out of every four freshmen are uncertain or tentative about their career choice. More than half of the students who declare a major at the time they enter college change their minds at least once before they graduate (Foote,

1980; Gordon, 1981), and only one senior out of three is majoring in the field that he preferred as a freshman (Willingham, 1985). In contrast to these statistics, only 14% of college freshmen estimate that they will change from their initial career choice or major (Fact File, 1989). Galinsky and Fast (1966) suggested that "one of the most clear-cut avenues through which identity concerns are expressed is the process of making a vocational choice" (p. 89). Lunneborg (1976) found that undecided students were far less satisfied with their university experience than were career decided students.

Whether career indecision is viewed as a normal, developmental concern of college students (Gordon, 1981; Grites, 1981; Harman, 1973) or as a chronic problem that may require treatment of underlying concerns before the career indecision can be effectively resolved through traditional methods (Cooper, Fuqua & Hartman, 1984; Crites, 1974; Fuqua & Hartman, 1983; Goodstein, 1965), it seems clear that career decision making is a central concern of college students. While the etiology of career indecision has strong implications for determining appropriate counseling interventions to assist with career decision making (Hartman, Fuqua & Blum, 1985), students' concerns about career issues go beyond choosing a major and include concerns about the job market and the process of finding employment. Goodson (1981) suggested that even among students who have chosen their major, a large percentage do not know how to identify a suitable occupation related to that major. Seventy-five percent of college students indicate that they are worried about their job prospects after college (Carnegie Foundation for Advancements in Teaching, 1986).

Heath's research on maturity (1976, 1977) suggested that the role of maturity has an important relationship with competence in performing a job and satisfaction with that job. He discussed a "core group of traits that describe a mature person" (Heath, 1976, p. 2) and examined the relationship between maturity and vocational behavior. Heath defined vocational adaptation as the manner in which a person "fashions an optimal adaptation between fulfilling his needs and talents and the demands of an occupation" (1976, p. 2). He found that the "maturity and psychological health" of a college student could predict his/her vocational adaptation 12-15 years later, "as independently rated by three judges who know him well" (Heath, 1976, p. 12). In a longitudinal study of predictors of life success, Heath (1977) found that measures of psychological maturity of college students were more predictive of adult vocational adaptation than were measures of scholastic aptitude and intelligence. This suggests that a broader conceptualization of a successful student is needed. Sprinthall, Bertin, and Whiteley (1982) described that a college student, in this broader view, would be

> "a thinking, feeling, relating person who considers the view points of others carefully and systematically, who can accurately understand and respond to emotions in others, who considers human relationships in accord with humane values, who can trust and modify his/her method of judgment" (p.42).

These findings that demonstrate a strong relationship between the psychological maturity of college students and their post-college accomplishments suggest the need for a stronger developmental focus in the college environment. Sprinthall, Bertin, and Whiteley (1982) suggested that facilitating the maturity of students is a "feasible alternative for

colleges and universities as a contribution to the accomplishment in adulthood of their graduates" (p. 42).

Grade Point Average

Measures of maturity or developmental levels may be meaningful indicators of career success, possibly even more predictive than the traditionally used indicator of ability, grade point average (Heath, 1977). Based on his review of forty-six studies, Hoyt (1965) concluded that college grades are not good predictors of vocational success after college. Sprinthall, Bertin, and Whiteley (1982) reported that research studies on college grades and post graduation success completed since the Hoyt (1965) review support his general conclusions, stating that "traditional measures of academic achievement in college including grade point average are not associated with accomplishment in adulthood" (Sprinthall, Bertin, & Whiteley, 1982, p. 42).

However, employers continue to use grade point average as an important criteria when considering college graduates for employment (Albrecht, Carpenter & Sivo, 1994). Employers indicate that, although they recognize the value of participation in extra-curricular activities, they continue to value grades as a very important factor in making hiring decisions.

Job Search Strategies

Support for the importance of developmental maturity in seeking employment can be found in the literature on job search behaviors or strategies. Vinton (1992) suggested that some students may feel overwhelmed by the task of seeking their first professional job. She offered the explanation that procrastinating about the job search may allow

students to avoid facing any fears and self-doubts which they may have about making the transition from college life to the world of work.

Kanfer and Hulin (1985) studied the attitudes and behaviors of a group of people who had been unexpectedly laid off from their jobs. They found that those who had accepted a new job within one month after being laid off were more confident of job search skills at the time of the lay-off and had engaged in a greater number of search behaviors than those who had not found a new job. This study suggests that people who do not feel confident in their ability to conduct a job search may further decrease their chances for employment by procrastinating about implementing their search and not persisting with the search activities at a high, consistent level.

In a review of job search literature, Schwab, Rynes and Aldag (1987) stated that job search strategies appear to be based on characteristics of the individuals seeking employment and the nature of the labor market in which they are pursuing employment, and that success in obtaining job offers is a function of the sources of job vacancy information and the intensity of job search behavior. They suggested that the persistence and intensity of job search activities, including number of employers contacted and hours per week spent searching, positively affect the speed with which employment offers are obtained. They stated that job search intensity is apparently related to job seekers financial need for employment and job seeker's self-esteem.

Kopelman, Rovenpor, and Millsap (1992) examined the relationship of job search behaviors to employees' expressed intentions to leave an organization and actual employee turnover. They hypothesized that expressed intentions to end employment with an

organization are not a good predictor of actual turnover because people act on their intentions to find a new job with great variability in intensity and variety in actions. Verbally expressing intentions to leave an organization is not always followed by engaging in specific overt job search behaviors, such as sending out resumes and interviewing with prospective employers. They suggested that successful job seekers may have a high degree of career crystallization in addition to a high level of job search behaviors.

Self-esteem of college students has also been linked to the effectiveness of job search strategies and outcomes. Ellis and Taylor (1983) found that measures of self-esteem predicted sources individuals used to find jobs, interview evaluations by prospective employers, satisfaction with the job search, number of offers received, acceptance of a job before graduation, and length of intended tenure. They hypothesized that students with low self-esteem would be more likely to use sources of job openings that required fewer social skills, such as responding to newspaper ads. These students would be less likely to use methods that are more effective, but that require stronger social skills, such as direct applications and making connections with employers through friends and relatives. They also suggested that these individuals would carry out less intense job searches, because of their low performance self-image. For the same reasons, these individuals would probably do poorly in job interviews, Ellis and Taylor proposed, which of course would result in fewer job offers.

To summarize, the literature on job search behaviors supports the idea that developmental maturity may affect an individual's ability to conduct a job search effectively to present himself or herself as a candidate for employment. The concept of

self-esteem, described in the literature as an important variable in job search effectiveness, appears to be closely related to the developmental vector Developing Competence (Chickering, 1969; Chickering & Reisser, 1993). Reisser (1995) described *developing a sense of competence*, a sub-task of the *Developing Competence* vector, as involving "how students feel about their overall performance and the worth of their accomplishments, based on how they think their performance compares with other students' and on feedback they receive from faculty members, coaches, advisors, and peers" (p. 507).

Although the studies reviewed were not all focused specifically on new college graduates, the implications seem to be relevant for graduates seeking their first post-graduation job. A major difference might be that since most traditional age college students are not working full-time they presumably would feel more pressure to carry out job search activities, especially from a financial need perspective, as opposed to job seekers seeking to change jobs. It seems that a likely effect of this would be to increase the intensity and persistence with which graduating seniors conduct job search activities.

In the discussion of their study on job search behaviors, Kopelman, Rovenpor, and Millsap (1992) stated that, "ultimately it is overt behavior, and only overt behavior, that translates intentions into outcomes" (p. 284). This statement illustrates the relevance of personal and career development to the job search strategies and employment outcomes of graduating college seniors. The literature suggests that students must achieve developmental readiness to choose a career direction and implement a plan for achieving career goals. The strategy each student uses for his or her job search may be the first real test of the soundness of career decisions made and the readiness to implement them.

Summary

Erikson (1968), Chickering (1969) and Super (1990) described many similar concerns and issues that individuals must address to continue positive developmental growth. On the basis of these developmental theories, the issues faced by students as they search for resolution of identity issues--including the selection of a college major and preparation for a career--are seen as critical issues that require some progress on the development of identity or self-concept. The commonly recognized prerequisites for effective career planning and decision making among traditional age college students include having a sense of self-confidence or autonomy, the ability for self-directedness, and an inner sense of self.

On the basis of the discussion of the identity versus role confusion stage of Erikson's (1968) theory of human development, Chickering's (1969) vector theory of college student development, and Super's (1990) theory of career development, it appears that the career development of college students could be enhanced by proactively designing college environments that facilitate students overall development, and, specifically, recognizing that there are common developmental issues that must be addressed before effective career planning can occur. A typical college system that essentially forces freshmen and sophomores to choose career direction and discourages academic major changes (Adams & Fitch, 1983) could be modified using a developmental approach to provide an environment that facilitates students' personal development while still helping them achieve academic goals.

To provide a campus community that facilitates and promotes psychosocial development, Sanford (1966) advocated that the environment provide the student with both challenges and supports. According to Sanford, "the institution which would lead an individual toward greater development must, then, present him with strong challenges, appraise accurately his ability to cope with challenges, and offer him support when they become overwhelming" (1966, p. 46). As it relates to the area of career development, it could be argued that the campus environment should challenge the student to explore both self and career options, to encourage the "crisis" described by Marcia (1966) as necessary for identity achievement. Appropriate programs and services must also be available to assist the student with this process of self-exploration and career decision making. Hurst (1987) suggested that colleges use an ecosystems or campus ecology approach, which considers that the campus environment contributes to students' decision making and behavior. An application of this model for career development would encourage student affairs practitioners to consider the social, personal, and interpersonal contexts within which career decisions and plans are made and implemented.

The student development model recognizes that each individual is unique and that some students will have concerns which are not developmental in nature that prevent them from effective career development. These may be due to indecisiveness as a trait (Crites, 1974; Hartman, Fuqua & Hartman, 1983; Salomone, 1982). However, for many students, the concerns are developmental in nature. The common career development practices of assessing interests and providing information about the world of work to college students who are under pressure to make a decision about a college major may be effective for

many students. These practices should, however, be only a part of a broad based developmental college environment that facilitates development necessary to reach career decision readiness. This would require that student affairs practitioners consider new career development strategies that are more closely aligned with the student development model.

The college student personnel field is based on a developmental orientation that focuses on recognizing individual differences, responding to the whole person, and working with each student at his/her developmental level (American Council on Education, 1937; 1949). On the basis of the many common areas identified by Erikson (1968), Chickering (1969), and Super (1990), the career development of college students could be enhanced by an emphasis on general developmental issues recognized as primary concerns for college students. It appears that addressing these concerns would have a direct, positive impact on students' career development in college and facilitate their personal growth in other areas, as well as having implications for long term vocational adaptation (Heath, 1976). The literature on job search strategies and behaviors appears to support the importance of developmental maturity as contributing to the effectiveness of job search strategies and to employment outcomes achieved (Ellis & Taylor, 1983; Schwab, Rynes & Aldag, 1987).

If a significant connection exists between the developmental maturity of college graduates and their employment outcomes, then it follows that strengthening the focus within the college experience on the overall development of students could result in more satisfactory job search experiences and outcomes for college graduates. As students and

colleges become more focused on employment outcomes and student satisfaction, understanding this connection becomes more relevant. While the college experience is not and should not be reduced to vocational preparation, planning and preparing for careers is a primary concern and expectation of students and others. College is a time of intense focus on personal growth as well as academic achievement. Colleges, in general, and student affairs operations, in particular, must begin to evaluate the developmental outcomes of college students, in order to establish campus environments that recognize and facilitate this important component of the college experience.

CHAPTER III

METHOD AND DESIGN

This study will examine the employment outcomes achieved by graduating seniors and will investigate the relationship between these outcomes and characteristics of the students including levels of psychosocial development, and career planning and job search activities in which students have engaged. Common developmental themes discussed in theories of college student development and career development will be considered, especially as they relate to employment outcomes. The study will address the need to consider students' concerns about employment outcomes from the conceptual framework of overall development, highlighting that career development is not an issue that can be isolated and dealt with separately from the many related concerns of college students (Manuele-Adkins, 1992). If the employment outcomes of college students are closely related to their psychosocial development, there are implications for career counseling and other developmental interventions.

If this study supports the connection between psychosocial development and employment outcomes, it would support the premise that college environments (including academic, social, and other realms) should be designed to facilitate the overall development of college students and that career development concerns would be naturally addressed as an inherent part of this process. It appears that this could be a benefit to students from the career development perspective, as well as in assisting students is addressing other developmental concerns.

Research Questions

1. What are the structural dimensions of the Career Activities Survey?

2. What are the relationships among dimensions of psychosocial development and dimensions of involvement in career activities?

3. What are the relationships among the dimensions of involvement in career activities and employment status?

4 . What are the relationships among the dimensions of psychosocial development and employment status?

Subjects

Approval for the study was granted by the university's Institutional Review Board. The sample for this study was 404 seniors who were enrolled in senior survey or capstone courses at a medium-sized land grant university in the Southwest. A senior survey or capstone course is a required class that is usually taken during a student's final semester before graduation and is the culminating academic experience in a specific major. This type of course is not required in all academic departments at this university, so academic advisors in each of the colleges assisted with identification of these classes within their respective colleges. From this list of classes, faculty members were contacted and asked to provide access to their classes for students' voluntary participation in the study. Students in 21 classes across all six undergraduate colleges participated. Students enrolled in the courses who were not seniors were excluded from the study. Data were collected for the study within one month prior to the May 1996 graduation. Students in the classes who expected to graduate in May or July 1996 were asked to participate.

The gender make-up of the sample was 57.2% male; 39.9% female. Ninety percent of students in the sample who reported their age were 28 or younger. Racial or cultural backgrounds reported by students were: White or Caucasian, 76.5%; Oriental or Asian or Pacific Islander, 12.4%; Indian or Native People, 3.2%; Black or Afro-American or African, 1.7%; Hispanic or Mexican American, 1.2%; Other or did not respond, 4.9%. The sample included graduating seniors in each of the six undergraduate colleges--Business Administration, 46.3%; Engineering, Architecture and Technology, 15.8%; Arts and Sciences, 10.6%; Education, 9.4%; Human Environmental Sciences, 9.4%; and Agriculture, 8.4%.

Instrumentation

The instruments used in this study were selected to provide data about college students' psychosocial development and about the career planning and job search activities in which students have engaged throughout the undergraduate experience.

Student Developmental Task and Lifestyle Inventory

The Student Developmental Task and Lifestyle Inventory (SDTLI) (Winston & Miller, 1987) was developed as an instrument to measure the level of psychosocial development of college students. Although it does not completely conform to the vector structure, the SDTLI is based on Chickering's (1969) work that described seven vectors of psychosocial development believed to be salient developmental issues for college students (Winston, 1990).

Winston and Miller (1987) describe a developmental task as "an interrelated set of behaviors and attitudes which the culture specifies should be exhibited at approximately

the same time by a given age cohort in a designated context" (p.8). A subtask is defined as a more specific component or aspect of a larger developmental task area. The SDTLI is intended for use with students 17 to 24 years of age in the context of colleges and universities (Winston, 1990).

The SDTLI measures three developmental tasks, Establishing and Clarifying Purpose (PUR), Developing Mature Interpersonal Relationships (MIR), and Academic Autonomy (AA). Scores on the PUR task indicate the extent to which students have well-defined and thoroughly explored career goals and plans; have synthesized knowledge about themselves and the world of work into appropriate career plans, both in terms of emotional commitment and taking action to move toward career goals; have established a personal direction and future plans that take into account values, lifestyle choices, and career objectives; have structured their lives and used the resources of their environments to meet life's demands effectively (Winston & Miller, 1987).

The PUR task is most directly relevant to career development, and consists of five subtasks: Educational Involvement (EI), which measures the extent to which students have defined and explored educational goals and are active, self-directed learners; Career Planning (CP), which measures the degree to which students have integrated self-knowledge and information about occupations, made an emotional commitment and are taking steps to achieve career goals; Lifestyle Planning (LP), which measures the extent to which students have established a direction and planned for the future while considering their values, family plans, and vocational and educational objectives; Life Management (LM), which measures the degree to which students are able to satisfy their daily needs,

meet responsibilities, manage finances, and meet academic demands; and Cultural Participation (CUP), which assesses cultural interests and the degree to which students participate in traditional cultural activities.

The Developing Mature Interpersonal Relationships (MIR) Task (Winston & Miller, 1987) includes the subtasks: Peer Relationships, Tolerance, and Emotional Autonomy. Students have resolved successfully the challenges of the Peer Relationships (PR) Subtask to the extent that they have developed peer relationships that are characterized by independence, frankness, and trust. This subtask reflects that they appreciate individual differences among friends and acquaintances and are not unduly influenced by pressure to conform to group norms or to conceal opinions that are not in agreement with others. The Tolerance Subtask (TOL) assesses the extent to which students are open to and accepting of people from different cultures, races and backgrounds -- responding to people as individuals and not rejecting contact with others who are different from them in some way. The Emotional Autonomy Subtask (EA) reflects the degree to which students are free from the need for constant reassurance, approval and direction from others, having developed confidence and trust in their own ideas and feelings.

The Academic Autonomy (AA) task also seems to be relevant for career development issues. Accomplishment of this task refers to the extent to which students can deal with ambiguity and monitor and control their own behavior to meet goals successfully and fulfill responsibilities, especially as it relates to academic achievements (Winston & Miller, 1987).

Validity.

To estimate the validity of the Establishing and Clarifying Purpose Task (PUR) task, the task was correlated with instruments believed to be conceptually related to it, such as the Career Planning Scale and the Career Exploration Scale of the Career Development Inventory (Super, Thompson, Lindeman, Jordaan, & Myers, 1981). The PUR task had a correlation of .70 with the Career Planning Scale and .49 with the Career Exploration Scale (Winston & Miller, 1987).

Winston and Miller state that high scorers on the PUR task are students who "(a) have well-defined and thoroughly explored educational goals and plans and are active, self-directed learners; (b) have synthesized knowledge about themselves and the world of work into appropriate career plans, both making an emotional commitment and taking steps now to allow realization of career goals; (c) have established a personal direction in their lives and made plans for their futures that take into account personal, ethical, and religious values, future family plans, and vocational and educational objectives; (d) exhibit a wide range of cultural interests and are active participants in traditional cultural events; and (e) structure their lives and manipulate their environment in ways that allow them to satisfy daily needs, meet personal responsibilities, manage personal finances appropriately, and satisfactorily meet academic demands" (Winston & Miller, 1987, p. 8-9).

The MIR task was correlated significantly with five items on the Mines-Jenson Interpersonal Relationships Inventory (Hood & Mines, 1986), including (a) seek friends who are quite different from me (.48), (b) accepting of differences in other people (.39), (c) avoid associating with people from different races and/or cultures when I can (-.33),

(d) often depend on parent(s) to tell me what to do (-.33), and (e) attending college only to get a diploma (-.29). MIR was correlated .51 with the Confidence Scale and .44 with the Family Independence Scale (Winston & Miller, 1987).

MIR was significantly correlated with the Iowa Developing Autonomy Inventory (Jackson & Hood, 1986) (.42) and with several scales from that inventory including (a) emotional independence-peers (.71), (b) mobility (.42), (c) management of money (.40), and (d) emotional independence-parents (.31) (Winston & Miller, 1987).

Based on the correlational studies, high scorers on the MIR task describe themselves as being "emotionally independent of peers and parents, as being autonomous individuals who feel self-assured in their abilities to manage their lives, as having low levels of anxiety, as accepting of cultural differences in others, and as being self-confident individuals (Winston & Miller, 1987, p.30).

Reliability.

The reliability of the SDTLI was estimated using two methods: test-retest, which gives an estimation of the stability of the instrument over time, and internal consistency. Reliability coefficients for test-retest reliability ranged from .70 to .89, which Winston and Miller (1987) interpret as indicating that the SDTLI is "quite adequate for group data" (p. 23) and that the level of variation in individual scores over short periods of time indicates acceptable reliability. Internal consistency measures of reliability were provided by coefficient alpha and inter-item and item-total correlations. Coefficient Alpha for the total inventory was .93; task coefficients were .90 for the PUR task, .76 for the MIR task, and .70 for the AA task. The authors suggest that the alpha coefficients are somewhat low

because the SDTLI was designed to include a wide range of difficulty in the items and because the items were selected to avoid duplication (Winston & Miller, 1987).

Career Activities Survey

This survey (see Appendix A) was developed by the author to assess the breadth and intensity of students' efforts to participate in career exploration, career planning, and job search activities as an undergraduate. The Senior Year Activities section of the survey is intended to assess the job search activities in which the student has engaged during the current academic year. A section on Career Planning Activities is intended to measure the extent to which the student used available resources and gathered information for career decision making and planning prior to the senior year.

The Career Activities Survey was subjected to three levels of analysis prior to use in the study. To assess the content validity of the instrument, the survey was evaluated and modified based on the suggestions of a panel of experts, including two faculty members in the Department of Applied Behavioral Studies in Education, two senior academic advisors from different academic units, a coordinator of career counseling, and a senior placement counselor. A factor analysis was conducted to evaluate the construct validity and reliability of the instrument. This analysis is reported in Chapter 4. The Employment Information section of the survey was used to classify the subjects for data analysis based on whether or not they reported having received job offers.

Research Design

The data for this study was collected during the Spring 1996 semester. The purpose of the study was to examine the relationship among employment outcomes,

psychosocial development, and engagement in career development activities. Specifically, the study was designed to examine the effect of employment outcomes classification (job offers received versus no job offers received) on measures of psychosocial development, and measures of career planning and job search activities. Scores on the developmental subtasks and scales measured by the SDTLI (Winston & Miller, 1987) and scores on the Career Activities Survey were obtained during the month prior to graduation in May 1996.

Procedures

Senior survey courses, capstone courses, and other courses in which large numbers of graduating seniors are enrolled were identified by faculty and academic advisors in each of the undergraduate colleges. Faculty agreed to provide access to graduating seniors enrolled in their classes. The faculty member or the researcher followed a detailed script for introducing the study to the students. Students who met the criteria for the study and who agreed to participate were asked to sign a consent form prior to data collection. Each subject was then provided with an SDTLI test booklet and answer form, a Career Activities Survey, and instructions for completing both instruments. Students completed both instruments in the classroom and returned the instruments and test booklets to the faculty member. Completion time for both instruments was about one hour. Graduation grade point averages and graduation status of students in the study were obtained from the registrar's official academic records at the end of the semester.

Data Analysis

Several analyses were conducted to consider the possible relationships between career entry employment, students' psychosocial development, and their involvement in

career planning and job search activities. To respond to the first research question, a factor analysis of the Career Activities Survey was conducted to identify its structural dimensions and to reduce the number of variables for additional analyses.

Multiple regression analyses were conducted to examine the relationship between SDTLI scores representing psychosocial development (predictor variables) and factor scores as defined through the factor analysis (criterion variables) representing involvement in career planning and job search activities. Zero-order correlations of the predictor variables with the criterion variables were also examined.

A two-group discriminant analysis was conducted to examine the relationship between employment status and involvement in career planning and job search activities. This analysis was conducted to examine whether students' reported involvement in career planning and job search activities differentiates students who have received job offers from those who have not received job offers.

A second two-group discriminant analysis was conducted to examine the relationship between employment status and psychosocial development. This analysis was conducted to examine whether students' scores on measures of psychosocial development differentiates those who have received job offers from those who have not received job offers.

CHAPTER IV

RESULTS

The purpose of this study was to examine the relationships among the employment status of graduating seniors, the students' psychosocial development, and their career and job search activities. Interest in this study was based on interactions with college seniors who were beginning the process of seeking career entry employment and observations that these students demonstrated a wide range of individual skills and apparent readiness to plan individually and to conduct an effective job search.

As seniors approaching graduation, the students had all demonstrated academic readiness for career entry employment. This study was developed to consider other readiness variables that might help explain the differences in the ways individual students approach the job search task and the possible implications for their employment outcomes. To consider these differences, this study focused on the possible relationships between career entry employment, students' psychosocial development, and their involvement in career planning and job search activities. The research questions addressed in this study were:

1. What are the structural dimensions of the Career Activities Survey?

2. What are the relationships among dimensions of psychosocial development and dimensions of involvement in career activities?

3. What are the relationships among the dimensions of involvement in career activities and employment status?

4 . What are the relationships among the dimensions of psychosocial development and employment status?

The results presented in this chapter are the analyses related to the research questions and the procedural analysis.

Results Related to Research Questions

Factor Analysis of the Career Activities Survey

Research Question 1: What are the structural dimensions of the Career Activities Survey?

To address Research Question 1, a factor analysis of the Career Activities Survey was conducted, using SPSS (SPSS for Windows, 1993). The factor analysis was used to identify the structural dimensions of the instrument and to reduce the number of variables for subsequent data analyses. The analysis was conducted on the first 39 items of the Career Activities Survey (see Appendix A) for which subjects are instructed to rate, on a 7-point Likert scale ranging from "no effort" to "extensive effort," the amount of effort spent on career planning and job search activities. The analysis was performed using the principal axis factor method. After examining both orthogonal and oblique rotations, an oblique solution was selected because substantial correlations existed among the factors. Initially, nine factors with eigenvalues greater than one were identified and evaluated for theoretical and practical significance. As shown in Table 1, these nine factors accounted for about 66% of the total variance. The Kaiser (1960) criterion recommends the practice of retaining those factors whose eigenvalues are greater than one. Stevens (1992) suggests that this practice is most accurate when the number of variables is less than 30

and the communalities are greater than .70. In this analysis of 39 variables, only two of the nine factors identified using the Kaiser criterion have communalities greater than .70. Stevens suggests that when N is greater than 250 and the mean communality is greater than or equal to .60., using either the Kaiser rule or the scree rule (Cattell, 1966) will result in an accurate estimate of the number of true factors. In this analysis, the mean communality of the factors was .64, with N of 384.

Table 1

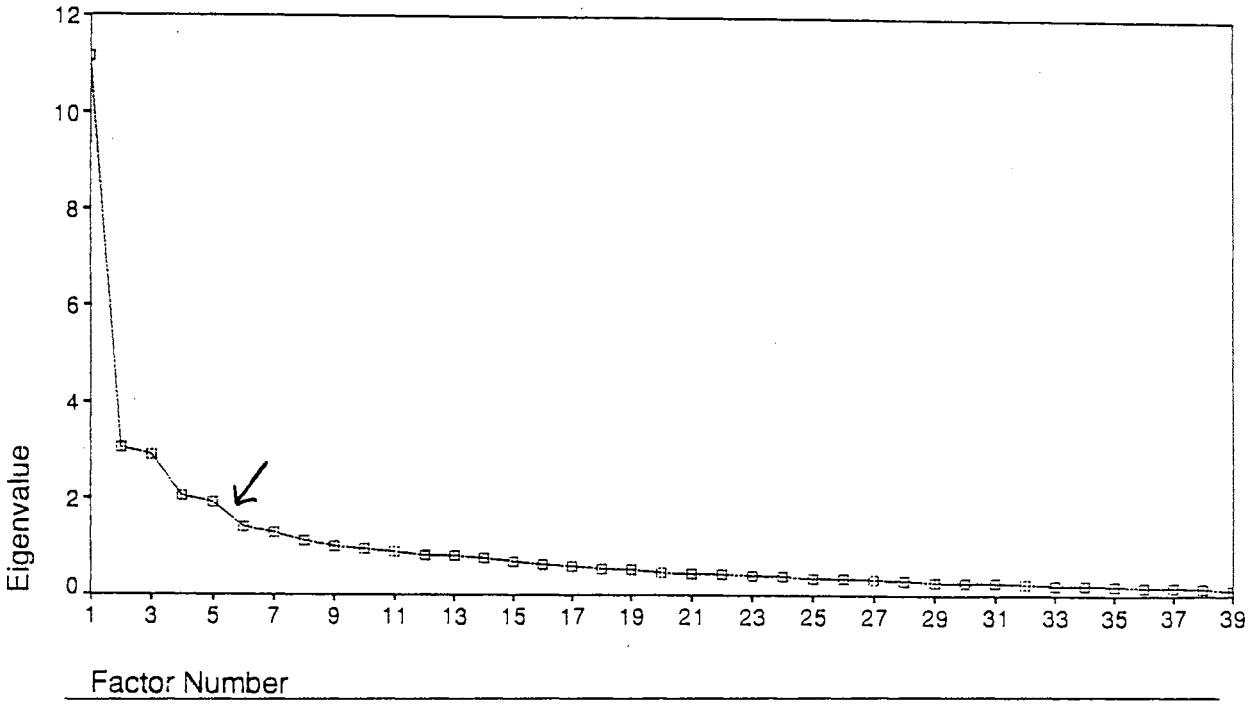
Variance Associated with the Career Activities Survey Initial Factors (N=384)

Measure	Factor	Eigenvalue	%of Variance	Cum%
Career Activities Survey	1	12.63	30.8	30.8
	2	3.17	7.7	38.6
	3	2.76	6.7	45.3
	4	2.01	4.9	50.2
	5	1.78	4.3	54.6
	6	1.40	3.4	58.0
	7	1.28	2.9	61.1
	8	1.18	2.9	64.0
	9	1.03	2.5	66.6

Using the scree test method (Cattell, 1966) for determining how many components to retain, the eigenvalues were plotted against their ordinal numbers (highest eigenvalue first, etc.). The scree rule recommends retaining all factors whose eigenvalues are in the sharp descent on the plot before the first one on the line where they begin to level off . Table 2 illustrates that five factors would be retained using the scree method in this analysis. Based on considerations of both the Kaiser and scree rules and the low percentage of variance accounted for by factors 6 through 9 (see Table 1), the first five factors were retained. To review the factor loadings for the initial nine factors, see the structure matrix in Appendix B.

Table 2

Factor Scree Plot of Career Activities Survey Initial Factors (N = 384)



A structure matrix showing the factor loadings for the analysis retaining five factors is shown in Appendix C. A pattern matrix showing the weights which can be used to calculate variable scores is shown in Appendix D. The pattern matrix summarizes the relative contribution of each factor to that variable for all the subjects. A summary of the five factors is reported in Table 3. Based on the content of the items loading on each factor, the factors that represent the structural dimensions of the Career Activities Survey were labeled as: General Job Search Activities, Career Planning Activities, Using Placement Resources, Interacting with Faculty, and Attending Workshops.

Table 3

Variance Associated with the Career Activities Survey Rotated Factors (N=384)

Measure	Factor	Eigenvalue	% of Variance	Cum %
Career Activities Survey	General Job Search Activities	12.27	31.5	31.5
	Career Planning Activities	2.68	6.9	38.4
	Using Placement Resources	2.27	5.8	44.2
	Interacting With Faculty	1.53	3.9	48.1
	Attending Workshops	1.34	3.4	51.6

The correlation matrix for the five factors is shown in Table 4, illustrating that an oblique solution was the appropriate method for the factor analysis because of the correlations among the factors. Although the correlation matrix shows a negative correlation of the first three factors with both the Interacting With Faculty and Attending Workshops factors, the relationship is actually positive. The negative correlation is a result of the negative loadings of items on factors 4 and 5 in the factor analysis.

Table 4

Factor Correlation Matrix, Career Activities Survey

	GJSA	CPA	UPR	IWF	AWS
General Job Search Activities	1.00				
Career Planning Activities	.21	1.00			
Using Placement Resources	.23	.08	1.00		
Interacting With Faculty	-.29	-.26	-.11	1.00	
Attending Workshops	-.50	-.34	-.29	.37	1.00

Multiple Regression Analyses of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey Factors

Research Question 2: What are the relationships among the dimensions of psychosocial development and the dimensions of involvement in career activities?

To respond to Research Question 2, five multiple regression analyses were conducted. In each case, the Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale (Winston & Miller, 1987) scores served as predictors. Consecutively, each of the five factor scores of the Career Activities Survey served as the criterion variable. The Intimacy Scale, an experimental scale of the Student Developmental Task and Lifestyle Inventory, was excluded from the analyses because it was not completed by about 20% of the subjects in the study and was not seen as critical to the analyses. Students completing the inventory were instructed to skip the section from which this Scale score is derived if they had not been involved in an intimate relationship in the past year. Scores for the Subtasks and the Salubrious Lifestyle Scale were used for all analyses. Descriptive statistics for the sample used in the multiple regressions are included in Appendix E.

Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey, General Job Search Activities

The first regression equation was obtained by regressing the ten Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale (Winston & Miller, 1987) scores on the General Job Search Activities factor score from the Career Activities Survey. The regression equation with all of the variables entered was significant

at .01 alpha level and accounted for approximately 34% of the variance in General Job Search Activities. As indicated in Table 5, the Career Planning Subtask accounted for about 30% of the variance in General Job Search Activities. After Career Planning was entered into the equation, none of the remaining subtasks/scale scores provided a statistically significant increment in R-squared, which increased only from .30 when Career Planning was entered to .34 when all variables had been entered. However, examinations of the zero-order correlations showed that six of the subtask scores, including the Career Planning Subtask score, had statistically significant correlations with the criterion score. The other five were the subtasks Lifestyle Planning, Life Management, Academic Autonomy, Cultural Participation, and Educational Involvement.

Table 5

Multiple Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale Scores on Career Activities Survey, General Job Search Activities Factor (N=250)

SDTLI Subtasks	R	Rsq	F(eqn)	Rsqch	F(ch)	r
Criterion: Career Activities Survey, General Job Search Activities						
Career Planning	.55	.30	109.35**	.30	109.35**	.55**
Lifestyle Planning	.56	.31	56.4 **	.00	2.69	.15**
Life Management	.56	.32	39.21**	.01	3.63	.30**
Salubrious Lifestyle	.57	.32	30.03**	.00	2.02	.05
Cultural Participation	.58	.33	24.37**	.00	1.46	.13*
Peer Relationships	.58	.33	20.56**	.00	1.34	-.05
Tolerance	.59	.34	18.19**	.00	2.98	.04
Academic Autonomy	.59	.34	16.05**	.00	1.04	.17**
Educational Involvement	.59	.34	14.30**	.00	.53	.32**
Emotional Autonomy	.59	.34	12.82**	.00	.04	-.00

*$p < .05$ **$p < .01$

Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey, Career Planning Activities

The second regression equation was obtained by regressing the Student Developmental Task and Lifestyle Inventory Subtasks and Salubrious Lifestyle Scale on the Career Planning Activities factor of the Career Activities Survey. The regression equation with all of the variables entered was significant at .01 alpha level and accounted for approximately 18% of the variance in Career Planning Activities. As shown in Table 6, the Subtasks Career Planning, Peer Relationships, and Salubrious Lifestyle accounted for about 15% of the variance. There was no significant incremental change after the third variable, Salubrious Lifestyle, was entered, with R^2 increasing by only an additional .03 when all variables were entered. Examination of the zero-order correlations in Table 6 indicated that in addition to the subtasks/scale scores that make statistically significant incremental contributions to the regression equation -- Career Planning, Peer Relationships, and Salubrious Lifestyle -- zero-order correlations of the criterion variable with the subtasks Educational Involvement, Life Management, and Cultural Participation are also statistically significant.

Table 6

Multiple Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale Scores on Career Activities Survey, Career Planning Activities Factor (N=250)

SDTLI Subtasks	R	Rsq	F(eqn)	Rsqch	F(ch)	r
Criterion: Career Activities Survey, Career Planning Activities						
Career Planning	.29	.08	24.07**	.08	24.07**	.29**
Peer Relationships	.35	.12	17.21**	.03	9.51**	-.17**
Salubrious Lifestyle	.39	.15	14.71**	.03	8.65**	.21**
Educational Involvement	.39	.15	11.58**	.00	2.02	.21**
Lifestyle Planning	.40	.16	9.77**	.00	2.30	.06
Life Management	.41	.17	8.59**	.00	2.38	.24**
Academic Autonomy	.42	.17	7.44**	.00	.61	.01
Tolerance	.42	.18	6.60**	.00	.76	-.02
Emotional Autonomy	.42	.18	5.85**	.00	.08	-.12
Cultural Participation	.42	.18	5.24**	.00	.00	.16**

*$p < .05$ **$p < .01$

Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey, Using Placement Resources

The third regression equation was obtained by regressing the Student Developmental Task and Lifestyle Inventory Subtasks and Salubrious Lifestyle Scale on the Using Placement Resources factor of the Career Activities Survey. As illustrated in Table 7, the regression equation with all the variables entered was not statistically significant. Table 7 indicated that the equation was statistically significant after variables Cultural Participation, Peer Relationships, Salubrious Lifestyle, and Lifestyle Planning were entered, but it was not statistically significant at the first step nor beyond the fifth step. The statistically significant relationships in the equation have little substantive value, as R^2 with all variables entered is .04. None of the subtasks/scale scores have statistically significant zero-order correlations with the criterion variable. In this case, the statistically significant increments in the equation may indicate a Type I error -- rejecting the null hypothesis, that there is no relationship, when it is true. Analysis of the zero-order correlations and of the total equation indicates that no strong relationship exists.

Table 7

Multiple Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale Scores on Career Activities Survey, Using Placement Resources Factor (N=250)

SDTLI Subtasks	R	Rsq	F(eqn)	Rsqch	F(ch)	r
Criterion: Career Activities Survey, Using Placement Resources						
Career Planning	.11	.01	3.174	.01	3.17	.11
Cultural Participation	.16	.02	3.33*	.01	3.47	-.07
Peer Relationships	.18	.03	3.02*	.00	2.35	-.08
Salubrious Lifestyle	.20	.04	2.75*	.00	1.93	.08
Lifestyle Planning	.21	.04	2.28*	.00	.42	.07
Emotional Autonomy	.21	.04	1.92	.00	.13	-.04
Educational Involvement	.21	.04	1.65	.00	.09	.06
Tolerance	21	.04	1.44	.00	.01	-.04
Life Management	.21	.04	1.28	.00	.00	.06
Academic Autonomy	.21	.04	1.14	.00	.00	.01

*$p < .05$ **$p < .01$

Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey, Interacting With Faculty

The fourth regression equation was obtained by regressing the Student Developmental Task and Lifestyle Inventory Subtasks and Salubrious Lifestyle Scale on the Interacting with Faculty factor of the Career Activities Survey. The regression equation with all of the variables entered was significant at .01 alpha level and accounted for approximately 26% of the variance in Interacting With Faculty. As indicated in Table 8, the Subtask Educational Involvement accounted for about 22% of the variance. The addition of the remaining variables increased R^2 by only .04 to .26. Only one of the additional variables, Peer Relationships, added a statistically significant increment to the equation. Although the subtasks Career Planning, Lifestyle Planning, Life Management, and Academic Autonomy did not make statistically significant incremental contributions to the regression equation, they did have statistically significant zero-order correlations with the criterion, as did the Educational Involvement Subtask.

Table 8

Multiple Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Scale Scores on Career Activities Survey, Interacting With Faculty Factor (N=250)

SDTLI Subtasks	R	Rsq	F(eqn)	Rsqch	F(ch)	r
Criterion: Career Activities Survey, Interacting With Faculty						
Educational Involvement	.47	.22	73.29**	.22	73.29**	-.47**
Cultural Participation	.49	.24	38.96**	.01	3.80	-.02
Peer Relationships	.50	.25	27.64**	.01	4.04*	.03
Career Planning	.51	.26	21.78**	.01	3.39	-.32**
Lifestyle Planning	.51	.26	17.60**	.00	.93	-.15**
Emotional Autonomy	.51	.26	14.71**	.00	.44	-.00
Salubrious Lifestyle	.51	.26	12.63**	.00	.39	-.07
Life Management	.51	.26	11.05**	.00	.25	-.19**
Tolerance	.51	.26	9.80**	.00	.13	.04
Academic Autonomy	.51	.26	8.80**	.00	.11	-.13*

*$p < .05$ **$p < .01$

Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey, Attending Workshops

The fifth regression equation was obtained by regressing the Student Developmental Task and Lifestyle Inventory Subtasks and Salubrious Lifestyle Scale on the Attending Workshops factor of the Career Activities Survey. The regression equation with all of the variables entered was significant at .01 alpha level and accounted for approximately 23% of the variance in Attending Workshops. As shown in Table 9, the subtasks Career Planning, Cultural Participation, and Peer Relationships accounted for about 19% of the variance. The addition of the remaining variables together added only an additional .04 to R^2. Zero-order correlations were statistically significant for Career Planning, Cultural Participation, Educational Involvement, and Life Management. The zero-order correlation for Peer Relationships was not statistically significant, although this variable added a statistically significant increment to the equation.

Table 9

Multiple Regression of Student Developmental Task and Lifestyle Inventory Subtasks/Scale Scores on Career Activities Survey, Attending Workshops Factor (N=250)

SDTLI Subtasks	R	Rsq	F(eqn)	Rsqch	F(ch)	r
Criterion: Career Activities Survey, Attending Workshops						
Career Planning	.40	.16	49.17**	.16	49.17**	-.40**
Cultural Participation	.43	.18	28.14**	.02	6.11*	-.26**
Peer Relationships	.44	.19	20.38**	.01	4.13*	.11
Lifestyle Planning	.45	.21	16.28**	.01	3.40	-.08
Educational Involvement	.47	.22	14.10**	.00	4.46	-.29**
Academic Autonomy	.47	.22	11.96**	.00	1.18	-.10
Emotional Autonomy	.48	.23	10.36**	.00	.82	.01
Salubrious Lifestyle	.48	.23	9.07**	.00	.28	-.10
Life Management	.48	.23	8.07**	.00	.23	-.20**
Tolerance	.48	.23	7.23**	.00	.01	.01

*$p < .05$ **$p < .01$

Discriminant Analysis of Employment Status on Involvement in Career Activities

Research Question 3: What are the relationships among the dimensions of involvement in career activities and employment status?

A two-group discriminant function analysis was conducted to address Research Question 3 regarding employment status and involvement in career activities. The five factor scores of the Career Activities Survey were treated as the independent variables, and the classification variable was employment status (job offers received or no job offers received). As shown in Table 10, the single discriminant function was found to be statistically significant ($x2(5) = 11.34$, $p.<.05$). The function is interpretable as a General Job Search Activities variable, since the loading on that factor was substantially higher than on the others. Higher scores on the General Job Search Activities factor are associated with the employment status of having received job offers. However, the percentage of variance accounted for was small, with $R^2 = .04$.

Table 10

Discriminant Analysis of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey Factors

Career Activities Survey Factors	Standardized Canonical Discriminant Function	Structure Matrix	Univariate F
General Job Search Activities	.93	.80	7.50*
Career Planning Activities	-.47	.38	.76
Using Placement Resources	.27	-.25	1.71
Interacting With Faculty	.23	-.22	.13
Attending Workshops	.01	.10	.57

*$p < .05$ **$p < .01$

The practical significance of this analysis may best be examined by looking at the actual classification results using this small, but statistically significant, relationship to predict job offer status. As shown in Table 11, the correct classification was achieved in only about 58% of the cases. This reflects the small discriminant function relationship and the low practical value of this analysis. It is assumed that a 50% correct classification rate

would be achieved by random classification. Therefore, using this function to classify cases represents an 8% improvement over chance.

Table 11

Classification Results of Discriminant Analysis of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey Factors (N = 286)

Actual Group	No. of Cases	Predicted Group Membership	
		Job Offers	No Job Offers
Job Offers	98	60 61.2%	38 38.8%
No Job Offers	162	70 43.2%	92 56.8%
Ungrouped cases	26	11 42.3%	15 57.7%
Percent of "grouped" cases correctly classified:		58.46%	

Discriminant Analysis of Employment Status on Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale

Research Question 4: What are the relationships among the dimensions of psychosocial development and employment status?

Another two-group discriminant function analysis was conducted to respond to Research Question 4. The ten subtasks/scale scores of the Student Developmental Task and Lifestyle Inventory were treated as the independent variables, and the classification variable was employment status (job offers received or no job offers received). The single discriminant function was not statistically significant, indicating no relationship between Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale (Winston & Miller, 1987) scores and employment status.

Procedural analyses

Tables 5-9 provide the results of the five multiple regression analyses of the Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale (Winston & Miller, 1987) scores on each of the five factors of the Career Activities Survey. An examination of these tables indicates that the Career Planning Subtask was a major contributor in three of the four statistically significant regression equations. Given the importance of the Career Planning Subtask in these regression analyses, the content of the Career Planning Subtask and the Career Activities Survey was re-examined by comparing items from both instruments and was found to address similar processes. For example, Student Developmental Task and Lifestyle Inventory Item 3 asks students to indicate whether the following statement is true or false, "I know where to find information about the prospects for employment in any occupational field." This seems to be closely related to Career Activities Survey Items 11 and 20, which ask students to rate the amount of effort spent on "Identifying prospective employers in my occupational interest area," and "Researching prospective employers in my career field." Student

Developmental Task and Lifestyle Inventory Item 45 asks students to indicate whether the following statement is true or false, "I have prepared my employment credentials and resume." Similarly, Career Activities Survey items 9 and 12 ask students to rate the amount of effort spent on "Preparing and/or revising my resume" and "Drafting cover letters to send to prospective employers." These similarities in item content on the two instruments raise concerns that the Career Activities Survey factor scores are, to some extent, assessing the same construct measured by the Career Planning Subtask scores, and that the correlations found between Career Planning and the factors of the Career Activities Survey should be considered to be artifactual. Correlations between the Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scales and the five Career Activities Survey factors are shown in Table 12.

Table 12

Pearson Correlations of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale with Career Activities Survey Factors

SDTLI Subtasks/ SL Scale	Career Activities Survey Factor Scores				
	General Job Search Activities	Career Planning Activities	Using Placement Resources	Interacting With Faculty	Attending Workshops
Academic Autonomy	.17**	.01	.01	-.13*	-.10
Career Planning	.55**	.29**	.11	-.32**	-.40**
Cultural Participation	.13*	.16**	-.07	-.02	-.26**
Emotional Autonomy	-.00	-.12	-.04	-.00	.01
Educational Involvement	.32**	.21**	.06	-.47**	-.29**
Life Management	.30**	.24**	.06	-.19**	-.20**
Lifestyle Planning	.15**	.06	.07	-.15**	-.08
Peer Relationships	-.05	-.17**	-.08	.03	.11
Salubrious Lifestyle	.05	.21**	.08	-.07	-.10
Tolerance	.04	-.02	-.04	.04	.01

*$p < .05$ **$p < .01$

Summary

Several analyses were conducted to consider the possible relationships between career entry employment, students' psychosocial development, and their involvement in career planning and job search activities. To respond to the First Research Question, a factor analysis of the Career Activities Survey was conducted to identify its structural dimensions and to reduce the number of variables for additional analyses. Five factors were retained and labeled to reflect the apparent structural dimensions of the instrument.

A series of five multiple regression analyses were conducted to examine the relationship between the psychosocial development and involvement in career activities of graduating seniors, to address Research Question 2. Statistically significant results were found in four of the five analyses. However, items from which one of the predictor variable scores are derived were found to be similar in content to items comprising the criterion variable, raising the concern that the relationship may be artifactual. In addition to this and other relationships identified through the regression equations, zero-order correlations of the predictor variables with each of the five criterion variables indicate several statistically significant relationships between the measures of psychosocial development and the measures of involvement in career activities.

A two-group discriminant analysis was conducted to examine the relationship between employment status and involvement in career activities, in response to Research Question 3. The resulting discriminant function was statistically significant and indicated that higher levels of involvement in job search activities were associated with having

received job offers. Only a small percentage of variance in employment status is accounted for by the function, therefore limiting its value in predicting employment status.

A second two-group discriminant analysis was conducted to examine the relationship between employment status and psychosocial development, in response to Research Question 4. The resulting discriminant function was not statistically significant, indicating no relationship between receiving job offers and psychosocial development.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The purpose of this study was to examine the relationships among the employment status of graduating seniors, the students' psychosocial development, and the students' involvement in career planning and job search activities. This study assumes that graduating seniors have demonstrated academic readiness for career employment and considers other readiness variables that might help explain students' individual differences in approaching the job search task and the possible implications for employment outcomes. To consider these differences, this study focused on the possible relationships between career entry employment, students' psychosocial development, and the students' involvement in career planning and job search activities.

Students graduate with individual variability in personal characteristics, academic credentials, and psychosocial development. Each individual graduate possesses a unique combination of degree obtained, grade point average, academic major, developmental maturity, and other personal characteristics. Most graduating seniors who do not plan to enter graduate or professional school immediately have apparent intentions to seek employment in a specified career field. However, students operationalize these intentions into job search actions with varying degrees of intensity and through a variety of behaviors (Schwab, Rynes, & Aldag, 1987).

Developmental theory suggests that students must resolve certain psychosocial developmental issues before they can make and implement effective career decisions

(Chickering, 1969; Chickering & Reisser, 1993; Erikson, 1968; Super, 1983). Therefore, it is relevant to include developmental assessment as an outcomes measure for graduating seniors and to examine how developmental readiness may impact the implementation of career plans through the job search process and the employment outcomes obtained. The research questions addressed in this study were:

1. What are the structural dimensions of the Career Activities Survey?

2. What are the relationships among dimensions of psychosocial development and dimensions of involvement in career activities?

3. What are the relationships among the dimensions of involvement in career activities and employment status?

4 . What are the relationships among the dimensions of psychosocial development and employment status?

Several analyses were conducted to consider the possible relationships between career entry employment, students' psychosocial development, and the students' involvement in career planning and job search activities. To respond to the First Research Question, a factor analysis of the Career Activities Survey was conducted to identify its structural dimensions and to reduce the number of variables for additional analyses. Five factors were retained and labeled to reflect the apparent structural dimensions of the instrument. These factors were labeled: General Job Search Activities, Career Planning Activities, Using Placement Resources, Interacting with Faculty, and Attending Workshops.

A series of five multiple regression analyses were conducted to examine the relationship between the psychosocial development of graduating seniors and their involvement in career activities to address Research Question 2. Statistically significant results were found in four of the five analyses. However, items from which one of the predictor variable scores are derived were found to be similar in content to items comprising the criterion variable, raising the concern that the relationship may be artifactual. In addition to this and other relationships identified through the regression equations, zero-order correlations of the predictor variables with each of the five criterion variables indicate several statistically significant relationships between the measures of psychosocial development and the measures of involvement in career activities.

In response to Research Question 3, a two-group discriminant analysis was conducted to examine the relationship between employment status and involvement in career activities. The resulting discriminant function was statistically significant and indicated that higher levels of involvement in job search activities were associated with having received job offers.

A second two-group discriminant analysis was conducted to examine the relationship between employment status and psychosocial development in response to Research Question 4. The resulting discriminant function was not statistically significant, indicating no relationship between having received job offers and psychosocial development.

Discussion

The literature on the psychosocial development of college students suggests that their progress in career planning and decision making is closely tied to individual progress in psychosocial development (Chickering, 1969; Chickering & Reisser, 1993; Erikson, 1968; Super, 1983). One hypothesis of this study was that more developmentally mature graduating seniors would be more likely to have achieved employment offers prior to graduation. This was based on the supposition that psychosocial maturity would be reflected in more effective involvement in career planning and job search activities which would lead to more exposure to appropriate employment opportunities and more job offers.

Limited support for this hypothesis was demonstrated in multiple regression analyses that supported that some measures of psychosocial development accounted for variance in individual involvement in career planning and job search activities. Zero order correlations among the developmental subtasks and the factors representing involvement in career planning and job search activities also indicated that relationships exist between developmental maturity and involvement in career planning and job search activities.

Although somewhat limited in its practical value, a discriminant analysis of students' employment status (job offers vs. no job offers) on measures of involvement in career planning and job search activities indicated that higher scores on involvement in general job search activities were associated with the employment status of having received job offers. A second discriminant analysis of students' employment status on measures of psychosocial development did not support the premise that there is a

relationship between receiving job offers and psychosocial development. These results are congruent with the literature which suggests that, regardless of developmental readiness, overt action on the part of the individual is required to conduct an effective job search (Kopelman, Rovenpor, and Millsap, 1992). Students' level of engagement in job search activities may vary due to several possible influences--for example, students may be working more while attending college, leaving less time to devote to their searches for employment until after graduation or possibly reducing the financial pressure to secure employment before graduation. Many other situations likely influence the level of involvement in this task. The diversity of students and their individual circumstances create varying patterns of job search behavior.

Perhaps stronger relationships would have been apparent if the data collection had been conducted a few weeks after graduation when students would, presumably, have had more time to focus on job search activities. A relevant factor that was not assessed as part of the study was the "quality" or "fit" of the employment offers received by students. It may be that students who were more developmentally mature or who had participated extensively in career planning and job search activities were more likely to have received employment offers that were more compatible with their career goals. Another possibility is that students who are less developmentally mature may be less likely to achieve graduation and would not be included in the study.

Based on the processes used in this study, it appears to be very difficult to separate measures of career development from measures of psychosocial development. In evaluating the results of the analyses conducted for this study, several of the items used to

measure students' involvement in career planning and job search activities were found to be very similar to items assessing their psychosocial development, especially in the subtask Career Planning. In this subtask, specific instances of students' overt participation in career planning and job search activities are recognized as indicators of increasing developmental maturity. This seems to support the premise that career development and psychosocial development are, in many ways, inseparable. In addition to Career Planning, other measures of developmental subtasks used in this study that support this premise include the subtask Lifestyle Management, which involves "establishing a personal direction and orientation in one's life that takes into account personal, ethical, and religious values, future family plans, and vocational and educational objectives" (Student Developmental Task and Lifestyle Inventory, Winston & Miller, 1987, p. 9); Educational Involvement, which indicates the degree to which students have conducted "careful investigation and self-analysis" and, as a result, have "selected areas of academic concentration for which they are intellectually suited and academically qualified, and with which they are temperamentally compatible" (p. 9); and Life Management, which assesses students demonstrated ability to "structure their lives and manipulate their environment in ways that allow them to satisfy daily needs and meet responsibilities without extensive direction or support from others" (p. 9). Subtasks that measure other developmental areas also appear to be relevant for career development, but those described above are the most closely related.

Conclusions

1. A factor analysis of the Career Activities Survey resulted in the identification of five factors which reflect the apparent structural dimensions of the instrument. Based on the content of the survey items loading on each factor, the factors that represent the structural dimensions of the Career Activities Survey were labeled as: General Job Search Activities, Career Planning Activities, Using Placement Resources, Interacting with Faculty, and Attending Workshops.

2. Statistically significant results were found in four of the five multiple regression analyses conducted to identify relationships among dimensions of psychosocial development and dimensions of involvement in career activities. This indicates that for four of the CAS factors, differences in students' involvement in career activities can be accounted for, to some extent, by psychosocial development. However, items from which one of the psychosocial development subtask scores are derived were found to be similar in content to items from the Career Activities Survey, raising the concern that the relationship between that subtask and involvement in career activities may be artifactual.

Additionally, zero-order correlations of the predictor variables with each of the five criterion variables indicate several statistically significant relationships between the measures of psychosocial development and the measures of involvement in career activities.

3. The statistically significant discriminant function identified through a two-group discriminant analysis indicated that higher levels of involvement in job search activities were associated with having received job offers. However, classification rates using the

function achieved a 58 % percent correct classification rate of employment status. It is assumed that a 50% correct rate would be achieved by random classification, so using this function would result in an 8% improvement over chance in predicting employment status.

4 . No statistically significant discriminant function was found in a two-group discriminant analysis conducted to examine the relationship between employment status and psychosocial development, indicating no relationship between receiving job offers and psychosocial development.

Recommendations for Research

The following research recommendations are presented as a result of the study:

1. A large number of the subjects had not received job offers at the time data were collected, approximately two weeks prior to graduation. It may be that a competitive job market contributed to a small number of early offers, or, perhaps, the trend for students to work longer hours while attending school resulted in their having less time to conduct a job search while still in school. It is recommended that future research include employment status of graduates at three months following graduation. This may lessen the influence of reduced involvement in job search activities by students with part-time jobs and the job market variability of employers' timing in making offers.

2. This study did not address the "quality" of job offers received or accepted. It is recommended for future research that job offers be evaluated for their desirability in terms of their perceived value in career advancement potential in the chosen career field. It seems that students who are more developmentally mature, both in terms of psychosocial development generally and career development specifically, would be more likely to

identify and obtain employment opportunities in appropriate entry level positions in their chosen career fields. This study would provide valuable information to the institution about the jobs its graduates are obtaining, and to students about the importance of involvement in career planning activities in reaching career goals.

3. It is recommended that future research be conducted to examine the relationship between college students' psychosocial development, particularly as it relates to career development, and attrition. These results may assist the institution in better meeting the developmental needs of students and could lead to improvements in student retention.

Recommendations for Practice

The following recommendations for practice are presented as a result of the study:

1. The data indicate that there are relationships among various aspects of involvement in career planning and job search activities and students' psychosocial development. It is recognized in the literature that psychosocial development issues related to identity development are primary concerns for college students and that students move through these issues in a somewhat predictable order (Chickering, 1969; Chickering & Reisser, 1993; Erikson, 1968). It is recommended that programs designed to assist students with career planning and job search processes should span the entire college experience, not just focusing on the junior and senior years.

2. The career development of college students appears to be very closely related to psychosocial development. This supports the recommendation for providing a campus environment or system that encourages exploration of self and career options rather than a

system that forces early career decisions or discourages changes. A general academic program for all students during their first year could be used to facilitate students' exploration of self and career options and could reduce both academic and social pressure for early identification with a specific academic program. This would facilitate students' resolution of identity development issues as well as encouraging more effective career decision making.

3. In addition to career planning programs, many other programs and policies are designed to facilitate students' developmental growth, in both student life and classroom experiences. It is recommended that these programs be designed in ways that recognize that developmental growth as a whole is closely related to career development. Career development programs that encourage students' self-exploration and facilitate learning about the world of work can enhance individual growth in other areas such as autonomy, identity, leadership skills, and motivation to achieve academically. Programs designed to enhance growth in these areas may also affect students' career development.

Summary

Although this study does not provide strong evidence that psychosocial development and involvement in career planning and job search activities increase the likelihood of graduating seniors having received job offers, it does support the premise that relationships exist among developmental maturity and career development experiences. It is hoped that this study will encourage those who work with college students to consider how the psychosocial and career development of students are

intertwined and to think about ways to provide experiences and environments that facilitate individual career and personal development.

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APPENDIX A

Career Activities Survey

Career Activities Survey

Senior Year Activities

Please indicate the amount of effort you have spent on each of the following job search activities by circling the number that best describes your level of effort on that item.

	no effort						**extensive effort**
1. Reading books or articles about how to look for a job	1	2	3	4	5	6	7
2. Using services available in the central placement office	1	2	3	4	5	6	7
3. Using services available in the college placement office	1	2	3	4	5	6	7
4. Planning my job search	1	2	3	4	5	6	7
5. Talking to friends about my job search	1	2	3	4	5	6	7
6. Talking to relatives about my job search	1	2	3	4	5	6	7
7. Talking to the following people about my job search:							
faculty member	1	2	3	4	5	6	7
academic advisor	1	2	3	4	5	6	7
placement counselor	1	2	3	4	5	6	7
8. Starting my job search six months before graduation	1	2	3	4	5	6	7
9. Preparing and/or revising my resume	1	2	3	4	5	6	7
10. Meeting with the following people to review my resume:							
faculty member	1	2	3	4	5	6	7
academic advisor	1	2	3	4	5	6	7
placement counselor	1	2	3	4	5	6	7
11. Identifying prospective employers in my occupational interest area	1	2	3	4	5	6	7
12. Drafting cover letters to send with resumes to prospective employers	1	2	3	4	5	6	7
13. Sending my resume to prospective employers	1	2	3	4	5	6	7
14. Reading the classified/help wanted ads in newspapers	1	2	3	4	5	6	7
15. Making telephone inquiries to prospective employers	1	2	3	4	5	6	7
16. Interviewing for jobs in my career field	1	2	3	4	5	6	7
17. Reading professional journals related to my occupational area	1	2	3	4	5	6	7
18. Requesting interviews through the campus interview process	1	2	3	4	5	6	7
19. Reviewing the company literature provided by prospective employers	1	2	3	4	5	6	7

20. Researching prospective employers in my career field 1 2 3 4 5 6 7

21. Attending workshops or seminars on conducting a job search 1 2 3 4 5 6 7

22. Attending workshops or seminars on preparing a resume 1 2 3 4 5 6 7

23. Attending workshops or seminars on interviewing for jobs 1 2 3 4 5 6 7

24. Attending career or job fairs 1 2 3 4 5 6 7

25. Learning about professional associations in my career field 1 2 3 4 5 6 7

26. Attending conferences for students/people employed in my career field 1 2 3 4 5 6 7

Career Planning Activities

Please indicate the amount of effort you have spent on each of the following career planning activities by circling the number that best describes your level of effort on that item.

27. Talking with the following people about my options before declaring a major: **no effort** **extensive effort**

faculty member 1 2 3 4 5 6 7

academic advisor 1 2 3 4 5 6 7

placement counselor 1 2 3 4 5 6 7

28. Investigating other possible major choices as an alternative to my declared major 1 2 3 4 5 6 7

29. Using the services provided by a career information resources center 1 2 3 4 5 6 7

30. Assessing how my personal characteristics relate to my career options 1 2 3 4 5 6 7

31. Participating in a computerized career exploration program 1 2 3 4 5 6 7

32. Taking classes for academic credit that focus on career activities 1 2 3 4 5 6 7

33. Conducting information interviews with people employed in my career field 1 2 3 4 5 6 7

Work Experience

Please check yes or no on the following items.

34. Have you participated in an employment internship in your career field or a related field? _____Yes _____No

35. Have you participated in a cooperative education program? _____Yes _____No

36. Have you had a summer job in your career field? _____Yes _____No

37. Have you ever worked part-time for an employer in your career field? _____Yes _____No

38. Will your degree be in the same major that you first declared as a freshman or sophomore? _____Yes _____No

Employment Information

39. Is it your intention to seek employment following graduation? _____Yes _____No

If no, please indicate your plans by checking below:

_____ Graduate school _____ Professional school _____ Military service

_____ Volunteer work _____Homemaker _____Other (please specify) _____

If yes, please go to the list of occupational areas on the back of this page and circle the area which is most closely related to the area in which you are seeking or have accepted employment.

Please write your selected occupational area here: _____.

40. Have you received one or more offers of employment? _____Yes _____No

If no, please go to item 42.

If yes, please provide the following information:

Organization: _____

Job Location: _____

Job Title: _____

Beginning Salary: _____

Organization: _____

Job Location: _____

Job Title: _____

Beginning Salary: _____

If you have received additional offers, please provide information about those offers on a separate sheet.

41. Have you accepted employment? _____Yes _____No

If yes, please provide the following information:

Organization: _____

Job Location: _____

Job Title: _____

Beginning Salary: _____

Are you going to work in a business owned by a family member? _____Yes _____No

Will you be self employed? _____Yes _____No

42. If the researcher may call you to follow-up on this study, please provide a telephone number where you can be reached this summer. Name: _____ Telephone: _____

Occupational Areas

Accountants and auditors
Actuaries
Administrative service managers
Adult education teachers
Aerospace engineers
Agricultural scientists
Architects
Archivists and curators
Budget analysts

Chemical engineers
Chemists
Civil engineers
Computer scientist
Computer systems analyst
Construction and building inspector
Cost estimator
Counselor
Designers
Dietitians and nutritionists

Economists and marketing research analysts
Education administrators
Electrical and electronics engineers
Employment interviewers
Engineering, science and data processing manager
Financial managers

Foresters and conservation scientists
Funeral director

Geologists and geophysicists
Health services manager
Hotel managers and assistants
Human services worker
Industrial engineers
Industrial production managers
Inspector and compliance officer, except construction

Landscape architects
Librarians
Loan officer or counselor
Management analysts and consultants
Marketing, advertising, and public relations managers
Mathematicians
Mechanical engineers
Metallurgical, ceramics and materials engineer
Mining engineers

Nuclear engineers
Occupational therapist
Operations research analyst
Personnel, training, and labor relations specialists and managers
Petroleum engineers

Photographers and camera operators
Protestant ministers
Public relations specialists
Purchasers and buyers
Property and real estate managers

Radio and television announcers and newscasters
Recreation workers
Recreational therapists
Reporters and correspondents
Respiratory therapists
Restaurant and food service managers
Retail managers

School teachers-kindergarten and elementary
School teachers - secondary and special education
Social scientists and urban planners
Social workers
Sociologists
Speech-language pathologists and audiologists
Statisticians
Surveyors
Underwriters
Urban and regional planners
Visual artists
Writers and editors

APPENDIX B

Structure Matrix of Career Activities Survey Initial Factor Loadings

Career Activities Survey

Structure Matrix of Initial Factor Loadings:	1	2	3	4	5	6	7	8	9
1. Reading books or articles about how to look for a job	.26	.17	.29	-.10	-.40	.50	.20	.21	.26
2. Using services available in the central placement office	.18	.16	.71	-.12	-.29	.23	.28	-.11	.06
3. Using services available in the college placement office	.24	.10	.83	-.11	-.35	.24	.30	-.02	.14
4. Planning my job search	.55	.18	.32	-.25	-.40	.77	.08	-.08	.44
5. Talking to friends about my job search	.45	.18	.30	-.31	-.36	.83	.03	-.10	.39
6. Talking to relatives about my job search	.30	.26	.17	-.22	-.32	.75	.07	-.17	.37
7. Talking to the following people about my job search:									
faculty member	.30	.14	.27	-.68	-.31	.48	.11	-.24	.37
academic advisor	.26	.09	.19	-.76	-.29	.39	.20	-.17	.33
placement counselor	.19	.15	.60	-.32	-.38	.26	.71	-.15	.19
8. Starting my job search six months before graduation	.44	.01	.46	-.29	-.38	.50	.01	-.02	.37
9. Preparing and/or revising my resume	.67	.15	.42	-.28	-.36	.52	-.03	-.10	.36
10. Meeting with the following people to review my resume:									
faculty member	.39	.13	.20	-.59	-.38	.33	.10	-.05	.30
academic advisor	.33	.12	.21	-.68	-.39	.19	.25	-.07	.29
placement counselor	.22	.24	.42	-.29	-.36	.16	.69	-.06	.16
11. Identifying prospective employers in my occupational interest area	.55	.13	.35	-.33	-.32	.62	-.01	-.27	.51
12. Drafting cover letters to send with resumes to prospective employers	.78	.20	.26	-.32	-.36	.48	.08	-.08	.40
13. Sending my resume to prospective employers	.83	.10	.48	-.24	-.33	.47	.02	-.17	.35
14. Reading the classified/help wanted ads in newspapers	.34	.20	.08	.04	-.21	.34	.25	.11	.24
15. Making telephone inquiries to prospective employers	.66	.17	.15	-.17	-.21	.39	.14	-.16	.34
16. Interviewing for jobs in my career field	.65	.09	.63	-.20	-.39	.45	-.02	-.22	.35
17. Reading professional journals related to my occupational area	.26	.20	.15	-.24	-.35	.36	.08	.01	.62
18. Requesting interviews through the campus interview process	.24	.10	.86	-.16	-.38	.21	.17	.00	.17
19. Reviewing the company literature provided by prospective employers	.46	.17	.68	-.27	-.44	.48	.02	-.02	.44
20. Researching prospective employers in my career field	.53	.23	.37	-.26	-.47	.59	-.06	-.09	.63
21. Attending workshops or seminars on conducting a job search	.24	.21	.40	-.24	-.80	.33	.17	-.13	.42

22. Attending workshops or seminars on preparing a resume	.20	.31	.25	-.28	-.86	.34	.19	-.08	.39
23. Attending workshops or seminars on interviewing for jobs	.21	.29	.29	-.24	-.90	.32	.21	-.12	.42
24. Attending career or job fairs	.30	.12	.49	-.12	-.60	.36	.13	-.12	.41
25. Learning about professional associations in my career field	.38	.22	.23	-.25	-.43	.41	.11	-.20	.73
26. Attending conferences for students/people employed in my career field	.23	.15	.19	-.25	-.53	.26	.09	-.26	.62
27. Talking with the following people about my options before declaring a major:									
faculty member	-.07	.56	.07	-.57	-.21	.18	.20	.05	.37
academic advisor	-.03	.52	.12	-.52	-.19	.24	.17	.00	.33
placement counselor	.02	.43	.11	-.19	-.25	.12	.55	.01	.28
28. Investigating other possible major choices as an alternative to my declared major	.11	.55	.06	-.14	-.21	.20	.13	-.04	.26
29. Using the services provided by a career information resources center	.10	.74	.21	-.09	-.26	.15	.32	-.14	.18
30. Assessing how my personal characteristics relate to my career options	.24	.61	.11	-.14	-.29	.38	.05	-.22	.40
31. Participating in a computerized career exploration program	.13	.73	.11	-.04	-.25	.18	.22	-.11	.15
32. Taking classes for academic credit that focus on career activities	.07	.29	-.04	-.14	-.16	.21	.12	-.34	.27
33. Conducting information interviews with people employed in my career field	.23	.47	-.01	-.16	-.32	.29	.18	-.33	.53

APPENDIX C

Structure Matrix of Career Activities Survey Retained Factor Loadings

Career Activities Survey

Structure Matrix of Retained Factor Loadings:	1	2	3	4	5
1. Reading books or articles about how to look for a job	.42	.21	.29	-.17	-.43
2. Using services available in the central placement office	.32	.17	.72	-.12	-.30
3. Using services available in the college placement office	.36	.11	.83	-.10	-.36
4. Planning my job search	.77	.24	.19	-.31	-.49
5. Talking to friends about my job search	.72	.23	.15	-.35	-.45
6. Talking to relatives about my job search	.59	.29	.07	-.26	-.40
7. Talking to the following people about my job search:					
faculty member	.51	.18	.16	-.69	-.40
academic advisor	.41	.14	.14	-.80	-.37
placement counselor	.27	.26	.70	-.42	-.41
8. Starting my job search six months before graduation	.62	.03	.33	-.29	-.45
9. Preparing and/or revising my resume	.74	.15	.28	-.28	-.40
10. Meeting with the following people to review my resume:					
faculty member	.44	.15	.15	-.60	-.40
academic advisor	.32	.17	.22	-.70	-.41
placement counselor	.21	.34	.56	-.41	-.37
11. Identifying prospective employers in my occupational interest area	.75	.18	.17	-.33	-.43
12. Drafting cover letters to send with resumes to prospective employers	.73	.23	.19	-.33	-.39
13. Sending my resume to prospective employers	.80	.12	.37	-.24	-.37
14. Reading the classified/help wanted ads in newspapers	.34	.26	.12	-.04	-.24
15. Making telephone inquiries to prospective employers	.60	.23	.12	-.22	-.26
16. Interviewing for jobs in my career field	.74	.09	.47	-.18	-.44
17. Reading professional journals related to my occupational area	.42	.24	.06	-.30	-.47
18. Requesting interviews through the campus interview process	.39	.06	.79	-.13	-.40
19. Reviewing the company literature provided by prospective employers	.66	.15	.51	-.25	-.51
20. Researching prospective employers in my career field	.75	.26	.19	-.29	-.59
21. Attending workshops or seminars on conducting a job search	.39	.25	.36	-.29	-.81

22. Attending workshops or seminars on preparing a resume	.34	.34	.23	-.33	-.82
23. Attending workshops or seminars on interviewing for jobs	.33	.34	.28	-.31	-.86
24. Attending career or job fairs	.46	.16	.41	-.16	-.62
25. Learning about professional associations in my career field	.55	.30	.11	-.34	-.56
26. Attending conferences for students/people employed in my career field	.39	.22	.10	-.32	-.61
27. Talking with the following people about my options before declaring a major:					
faculty member	.11	.55	.07	-.58	-.29
academic advisor	.18	.51	.09	-.53	-.29
placement counselor	.08	.51	.26	-.34	-.31
28. Investigating other possible major choices as an alternative to my declared major	.19	.55	.04	-.17	-.24
29. Using the services provided by a career information resources center	.16	.74	.28	-.16	-.28
30. Assessing how my personal characteristics relate to my career options	.38	.62	.01	-.17	-.34
31. Participating in a computerized career exploration program	.17	.69	.17	-.09	-.25
32. Taking classes for academic credit that focus on career activities	.17	.33	-.07	-.19	-.20
33. Conducting information interviews with people employed in my career field	.35	.52	-.03	-.28	-.42

APPENDIX D

Pattern Matrix of Career Activities Survey Retained Factor Loadings

Career Activities Survey

Pattern Matrix of Retained Factor Loadings:	1	2	3	4	5
1. Reading books or articles about how to look for a job	.25	.06	.16	.02	-.25
2. Using services available in the central placement office	.15	.08	.67	.02	-.00
3. Using services available in the college placement office	.16	.00	.78	.06	-.08
4. Planning my job search	.69	.04	-.00	-.05	-.10
5. Talking to friends about my job search	.65	.03	-.03	-.12	-.08
6. Talking to relatives about my job search	.51	.14	-.09	-.05	-.09
7. Talking to the following people about my job search:					
faculty member	.33	-.05	.01	-.59	-.03
academic advisor	.19	-.10	.01	-.76	-.02
placement counselor	-.03	.11	.64	-.29	-.09
8. Starting my job search six months before graduation	.50	-.17	.16	-.10	-.17
9. Preparing and/or revising my resume	.69	-.02	.10	-.06	-.00
10. Meeting with the following people to review my resume:					
faculty member	.25	-.06	.00	-.50	-.11
academic advisor	.06	-.06	.09	-.64	-.14
placement counselor	-.08	.21	.50	-.29	-.07
11. Identifying prospective employers in my occupational interest area	.70	-.01	-.01	-.11	-.04
12. Drafting cover letters to send with resumes to prospective employers	.68	.06	.02	-.12	.02
13. Sending my resume to prospective employers	.79	-.04	.20	-.03	.08
14. Reading the classified/help wanted ads in newspapers	.30	.20	.03	.12	-.05
15. Making telephone inquiries to prospective employers	.61	.12	-.00	-.05	.10
16. Interviewing for jobs in my career field	.67	-.08	.31	.04	-.05
17. Reading professional journals related to my occupational area	.24	.05	-.10	-.11	-.32
18. Requesting interviews through the campus interview process	.17	-.05	.72	.04	-.14
19. Reviewing the company literature provided by prospective employers	.49	-.04	.35	-.01	-.17
20. Researching prospective employers in my career field	.60	.03	-.03	-.00	-.28
21. Attending workshops or seminars on conducting a job search	-.03	-.03	.14	.00	-.80

22. Attending workshops or seminars on preparing a resume	-.10	.06	.00	-.04	-.83
23. Attending workshops or seminars on interviewing for jobs	-.14	.05	.04	.00	-.90
24. Attending career or job fairs	.18	-.04	.23	.10	-.51
25. Learning about professional associations in my career field	.36	.09	-.09	-.10	-.34
26. Attending conferences for students/people employed in my career field	.10	-.00	-.09	-.10	-.55
27. Talking with the following people about my options before declaring a major:					
faculty member	-.13	.44	.00	-.49	-.02
academic advisor	-.03	.40	.01	-.44	.00
placement counselor	-.18	.43	.20	-.21	-.11
28. Investigating other possible major choices as an alternative to my declared major	.06	.52	-.02	-.00	-.03
29. Using the services provided by a career information resources center	-.02	.74	.23	.04	.01
30. Assessing how my personal characteristics relate to my career options	.27	.56	-.10	.06	-.06
31. Participating in a computerized career exploration program	.02	.70	.11	.10	-.00
32. Taking classes for academic credit that focus on career activities	.09	.27	-.15	-.08	-.08
33. Conducting information interviews with people employed in my career field	.18	.40	-.18	-.05	-.22

APPENDIX E

Descriptive Statistics for

Multiple Regression Analyses of

Student Developmental Task and Lifestyle Inventory

Subtasks/Salubrious Lifestyle Scale

on Career Activities Survey Factors

Descriptive Statistics for Multiple Regression Analyses of Student Developmental Task and Lifestyle Inventory Subtasks/Salubrious Lifestyle Scale on Career Activities Survey Factors

	Mean	SD	Variance	N
Career Activities Survey:				
General Job Search Activities	.27	.82	.68	250
Career Planning Activities	1.90	.90	.82	250
Using Placement Resources	.11	.98	.96	250
Interacting With Faculty	-7.00	.95	.90	250
Attending Workshops	-.11	.93	.88	250
Student Developmental Task and Lifestyle Inventory:				
Academic Autonomy	5.72	2.60	6.76	250
Career Planning	13.12	3.14	9.87	250
Cultural Participation	3.04	1.44	2.09	250
Emotional Autonomy	4.85	1.97	3.90	250
Educational Involvement	11.02	2.78	7.76	250
Life Management	9.92	3.08	9.49	250
Lifestyle Planning	7.35	2.29	5.25	250
Peer Relationships	8.52	2.48	6.16	250
Salubrious Lifestyle	4.88	2.15	4.66	250
Tolerance	5.60	2.05	4.24	250

APPENDIX F

Institutional Review Board Approval

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 04-01-96 **IRB#:** ED-96-097

Proposal Title: AN ANALYSIS OF THE RELATIONSHIP OF EMPLOYMENT OUTCOMES TO DEVELOPMENTAL VARIABLES AND JOB SEARCH STRATEGIES OF COLLEGE GRADUATES

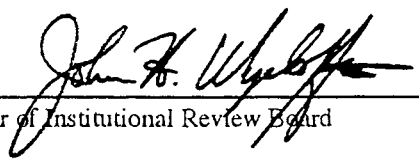
Principal Investigator(s): Marcia M. Dickman, Pamela J. Bowers

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL.
ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:  Date: April 5, 1996

Chair of Institutional Review Board

APPENDIX G

Subject Consent Form

1996 OSU Graduating Seniors Study

CONSENT FORM

"I _____, hereby authorize or direct Pam Bowers, or associates or assistants of her choosing, to perform the following treatment or procedure."

Instructions for completing The Student Developmental Task and Life Style Inventory, and the Career Activities Survey, will be provided to me, and I will complete the instruments as requested and return them to the person indicated in the instructions. Completion of both of these instruments will take about one hour. The information I provide will be kept confidential.

I authorize the release of my academic records to be used in this study. No identifying information will be provided as a part of any reporting of the data or results of this study. The information I provide in this study may benefit future OSU students through improved career development programs and services.

This is done as a part of a study entitled An Analysis of the Relationship of Employment Outcomes to Developmental Variables and Job Search Strategies of College Graduates.

"I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director."

I may contact Pam Bowers at 744-5328 or Marcia Dickman at 744-6036. I may also contact University Research Services, 001 Life Sciences East, Oklahoma State University, Stillwater, OK 74078; Telephone: 405-744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date: _____ Time: _____ (a.m./p.m.)

Signed: _____

Signature of Subject

VITA

Pamela J. Bowers

Candidate for the Degree of

Doctor of Philosophy

Thesis: AN ANALYSIS OF THE RELATIONSHIP OF EMPLOYMENT OUTCOMES TO DEVELOPMENTAL VARIABLES AND JOB SEARCH STRATEGIES OF COLLEGE GRADUATES

Major Field: Applied Behavioral Studies

Specialization: Student Personnel Administration

Biographical:

Education: Received Bachelor of Science degree in Journalism from Oklahoma State University, Stillwater, Oklahoma, in May 1979; received Master of Science degree in Student Personnel and Guidance from Oklahoma State University, Stillwater, Oklahoma, in December, 1981. Completed the Requirements for the Doctor of Philosophy degree in Applied Behavioral Studies, with specialization in Student Personnel Administration, at Oklahoma State University in May, 1997.

Experience: Assistant to the Vice President for Student Affairs, Oklahoma State University, 1993 to present; Assistant Director, University Placement, Oklahoma State University, 1987 to 1993; Coordinator of Special Programs, High School and College Relations, Oklahoma State University, 1986 to 1987; Associate Dean for Student Services, East Central University, 1984 to 1986; Freshman Services Counselor, Freshman Programs and Services, Oklahoma State University, 1979 to 1984

Professional Memberships: National Association of Student Personnel Administrators; Council for the Advancement and Support of Education; Oklahoma College Student Personnel Association; Oklahoma Career Development and Placement Association; Southwest Placement Association