1976

A study of the effects of life career development counseling on the self-concept and career maturity of community college students

Michael Joseph Johnson
College of William & Mary - School of Education

A STUDY OF THE EFFECTS OF LIFE CAREER DEVELOPMENT COUNSELING ON THE SELF-CONCEPT AND CAREER MATURITY OF COMMUNITY COLLEGE STUDENTS

A Dissertation

Presented to the

Faculty of the School of Education

College of William and Mary in Virginia

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

---

by

Michael J. Johnson

May 1976

APPROVAL SHEET

We the undersigned do certify that we have read this dissertation and that in our individual opinions it is acceptable in both scope and quality as a dissertation for the degree of Doctor of Education.

Accepted May 1976 by

Kevin E. Geoffroy, Ed.D., Chairman

Fred L. Adair, Ph.D.

Curtis H. O'Shell, Ed.D.

ABSTRACT

A STUDY OF THE EFFECTS OF LIFE CAREER DEVELOPMENT COUNSELING ON THE SELF-CONCEPT AND CAREER MATURITY OF COMMUNITY COLLEGE STUDENTS

JOHNSON, MICHAEL JOSEPH, Ed.D.
THE COLLEGE OF WILLIAM AND MARY IN VIRGINIA, 1976

CHAIRMAN: DR. KEVIN E. GEOFFROY

The principle that career development should involve the total individual by sequentially integrating goals, values, plans and decisions in such a manner that personal empowerment is enhanced provides a relevant framework which has gained broad acceptance. The Life Career Development System (LCDS) potentially offers a modular approach which can be adapted to a particular educational environment in a way which facilitates the development of personal empowerment. Tentative reports concerning the effectiveness of this program have been positive but they have been based on nonstandardized evaluative measures. Few reports of any kind have dealt with the effectiveness of the system at the community college level.

The purpose of this study was to provide an evaluation of this strategy by determining what effect it might have on community college students in terms of (a) self-concept, (b) vocational maturity, (c) independent/responsible behavior, and (d) a process orientation to planning.

This investigation utilized a compromise experimental group--control group design reflecting the preclusion of randomization--a necessary limitation. The subjects were 29 students desirous of

exploring vocational options in a group counseling context and 29 students enrolled in an elementary course in general psychology. The former were designated as the experimental group, the latter as the control group. All students were drawn from Thomas Nelson Community College in Hampton, Virginia. Treatment, the active variable, consisted of the following LCDS modules: Exploring Self, Determining Values, Setting Goals, Expanding Options, Overcoming Barriers and Using Information. These modules were explored by the experimental group for 3 hours each week during an 11-week period. The control group received no treatment during this same period. Both groups were administered pretests and posttests at the beginning and end of this period. Statistical tests of significance concerning the four major hypotheses involved one-way analysis of covariance. The effects of the LCDS were determined by comparing the experimental and control groups. In all cases age and appropriate pretest scores were used as covariants in order to control for initial inequalities in these areas. Hypotheses were tested at the .05 significance level.

1. The hypothesis that groups would differ significantly in terms of self-concept as determined by the Total Score, Identity, Self-Satisfaction and Behavior scales of the Tennessee Self-Concept Scale was rejected.

2. The hypothesis that groups would differ significantly in terms of vocational maturity as determined by the Attitude Scale of the Career Maturity Inventory was rejected.

3. The hypothesis that groups would differ significantly in

terms of independent/responsible behavior as determined by a significant other utilizing the Self-Confidence, Personal Adjustment, Autonomy, and Change scales of the Adjective Check List was rejected.

4. The hypothesis that groups would differ significantly in terms of a process orientation to planning as determined by content analysis of self-descriptive essays was accepted. This difference, however, was not in the directions expected, was relatively weak, and probably resulted from an inability to control for motivation.

In conclusion, the LCDS apparently had no effect in terms of the hypothesized variables.

Acknowledgments

The completion of this investigation has involved the assistance and cooperation of a number of individuals during what was, for me, a particularly crucial period of time. Their efforts on my behalf have been appreciated. I wish to take this opportunity to offer my thanks.

To Dr. Kevin Geoffroy, my committee chairman, for his direct and pertinent advice throughout the writing of this dissertation, for the opportunities he has provided me as a graduate assistant and finally for his pragmatic view of gamesmanship which has at times aided me in maintaining my perspective.

To Dr. Fred Adair for his ready assistance at certain critical times and for his encouragement when I initially entered the doctoral program.

To Dr. Curtis O'Shell for his warm support throughout the writing of this dissertation and during my graduate experience at the College.

To Dr. Armand Galfo who has generously provided time and advice while serving as an invaluable source of information concerning certain statistical matters.

To the staff of Thomas Nelson Community College Counseling Center for their cooperation, but especially to Dorrine Douglass for inestimable amounts of time, assistance and support without which this research could simply not have been completed.

Finally I am grateful to the members of my family, present and absent, who have always encouraged marching to one's own drummer.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	x
LIST OF FIGURES	xiii
Chapter	
1. INTRODUCTION	2
Purpose of the Study	6
Statement of the Problem	12
Vocational Maturity	12
Process Orientation to Planning as Determined by External Criteria	13
Self-Concept	14
Independence and Responsibility as Determined by a Significant Other	15
Hypotheses	15
Theoretical Rationale	17
Self-Concept	17
Vocational Maturity and Vocational Adjustment	22
Definition of terms	24
Self-Concept	24
Vocational Maturity	25
Independent/Responsible Behavior	25

Significant Other 25
Process Orientation to Planning 25
Content Analysis 25
Plan of Presentation 26
2. A REVIEW OF RELATED LITERATURE 27
Group Counseling 27
Life Career Development System 41
Self-Concept 48
Vocational Maturity 55
Summary 65
3. METHODOLOGY 66
Population 66
Research Design 67
Hypotheses 68
Assigned Variables 69
Dependent Variables 71
Hypothesis 1 71
Hypothesis 2 71
Hypothesis 3 71
Hypothesis 4 71
Instruments 71
Tennessee Self-Concept Scale 71
Total Score 72
Identity or Self-Concept 72
Self-Satisfaction 73
Behavior 73

Career Maturity Inventory 74

Adjective Check List 76

Self-Confidence 76

Personal Adjustment 77

Autonomy 77

Change 77

Process Orientation to Planning

Indicator 79

Procedures 83

Statistical Methods 86

4. RESULTS 88

Hypothesis 1 89

Hypothesis 2 90

Hypothesis 3 99

Hypothesis 4 111

Summary 115

5. SUMMARY, CONCLUSIONS, IMPLICATIONS AND

RECOMMENDATIONS 116

Summary 116

Conclusions 118

Hypothesis 1 118

Hypothesis 2 119

Hypothesis 3 119

Hypothesis 4 120

Limitations 122

Implications 123

Recommendations 124

APPENDIX

A. Academic and Professional Qualifications of Content Analysts 127

B. Grade Contract 128

C. Pretest Letter 129

D. Posttest Letter 130

E. Tennessee Self-Concept Scale Standard Scores, Hypothesis 1--Total Score 131

F. Tennessee Self-Concept Scale Standard Scores, Hypothesis 1--Identity or Self-Concept 133

G. Tennessee Self-Concept Scale Standard Scores, Hypothesis 1--Self-Satisfaction 135

H. Tennessee Self-Concept Scale Standard Scores, Hypothesis 1--Behavior 137

I. Age Data--Experimental and Control Groups 139

J. Career Maturity Inventory Raw Scores, Hypothesis 2 141

K. Adjective Check List Standard Scores, Hypothesis 3--Self-Confidence 143

L. Adjective Check List Standard Scores, Hypothesis 3--Personal Adjustment 145

M. Adjective Check List Standard Scores, Hypothesis 3--Autonomy 147

N. Adjective Check List Standard Scores, Hypothesis 3--Change 149

O. Process Orientation to Planning Indicator Raw Scores, Hypothesis 4 151

REFERENCES 153

LIST OF TABLES

Table		Page
1.	Hypothesis 1--Total Score, Summary Data of the Variables	91
2.	Hypothesis 1--Identity or Self-Concept, Summary Data of the Variables	92
3.	Hypothesis 1--Self-Satisfaction, Summary Data of the Variables	93
4.	Hypothesis 1--Behavior, Summary Data of the Variables	94
5.	Hypothesis 1--Total Score, Analysis of Covariance of Control and Experimental Group Scores on the Total Score Scale of the Tennessee Self-Concept Scale	95
6.	Hypothesis 1--Identity or Self-Concept, Analysis of Covariance of Control and Experimental Group Scores on the Identity or Self-Concept Scale of the Tennessee Self-Concept Scale	96
7.	Hypothesis 1--Self-Satisfaction, Analysis of Covariance of Control and Experimental Group Scores on the Self-Satisfaction Scale of the Tennessee Self-Concept Scale	97

8. Hypothesis 1--Behavior, Analysis of Covariance of Control and Experimental Group Scores on the Behavior Scale of the Tennessee Self-Concept Scale 98

9. Hypothesis 2--Career Maturity Inventory, Summary Data of the Variables 100

10. Hypothesis 2--Analysis of Covariance of Control and Experimental Group Scores on the Attitude Scale of the Career Maturity Inventory 101

11. Hypothesis 3--Self-Confidence, Summary Data of the Variables 103

12. Hypothesis 3--Personal Adjustment, Summary Data of the Variables 104

13. Hypothesis 3--Autonomy, Summary Data of the Variables 105

14. Hypothesis 3--Change, Summary Data of the Variables 106

15. Hypothesis 3--Self-Confidence, Analysis of Covariance of Control and Experimental Group Scores on the Self-Confidence Scale of the Adjective Check List 107

16. Hypothesis 3--Personal Adjustment, Analysis of Covariance of Control and Experimental Group Scores on the Personal Adjustment Scale of the Adjective Check List 108

17. Hypothesis 3--Autonomy, Analysis of Covariance of Control and Experimental Group Scores on the Autonomy Scale of the Adjective Check List 109

18. Hypothesis 3--Change, Analysis of Covariance of Control and Experimental Group Scores on the Change Scale of the Adjective Check List 110

19. Hypothesis 4--Process Orientation to Planning Indicator, Summary Data of the Variables 112

20. Hypothesis 4--Analysis of Covariance of Control and Experimental Group Scores on the Process Orientation to Planning Indicator 113

LIST OF FIGURES

Figure		Page
1.	Learning Paradigm	43
2.	One-way Classification Analysis of Covariance Paradigm for Hypotheses 1, 2, 3 and 4	70

There is no solace on earth for us--for such as
we--
Who search for a hidden city that we shall
never see.
Only the road and the dawn, the sun, the wind,
and the rain,
And watch fire under stars, and sleep,
and the road again.

from "The Seekers"
by John Masefield

One goal is reached; others emerge.

Michael Joseph Johnson

A Study of the Effects of Life Career Development Counseling on the Self-Concept and Career Maturity of Community College Students

Chapter 1

Introduction

Psychological education has continued to grow and gain recognition as educators at all levels have come to be increasingly concerned about effectiveness and relevance. This concern has focused on two broad areas involving an awareness of the magnitude of the helping task and an awareness of the gestalt nature of man in and out of an educational context. The increasing number of psychosocial problems calls for a revolutionary preventative approach (Alschuler, 1975; Ivey & Alschuler, 1973). Psychological education is such an approach. It stresses experiential knowledge, long-term life goals, new action patterns which seek to avoid a dichotomous learning/living situation and a process orientation involving many methods effectively directed toward a particular outcome. In short, older strategies which concentrate on remediation for the individual are no longer practical or viable in and of themselves.

Benson and Blocker (1975) note that a number of writers have emphasized a broader approach to counseling, calling attention to such areas as self-esteem, self-awareness, personal decision making, life planning, life style options, and interpersonal competence (Benson, 1972; Berdie, 1972; Blocker, 1974; Caldwell, 1970; Cook, 1971; and Dinkmeyer & Carlson, 1975). Psychological education seeks to approach man from a broad holistic perspective which indicates concern for his potential. In brief, this reflects a recognition that "at a certain depth of specialization the divisions of scientific knowledge begin to

run together. . . . however clear cut [the] parts may have seemed to be [Watts, 1961, p. 18]." In terms of human behavior, it becomes impossible to separate various patterns and impinging determinants. Watts states this holistic view succinctly: "it is impossible to cut into this network, to isolate a portion without it becoming frayed and unravelled at all its edges [p. 18]." Thus, psychological education seeks to be effective in terms of the population reached and relevant in its broad conceptualization of man's needs. This perspective provides a useful base from which to approach student development. The framework provided is adequate to accommodate any number of productive programs dealing with the whole student. As Roe (1956) notes: "one can start with any facet of human behavior and work through it to the total personality [p. 6]."

Career education has attempted to approach the whole person by focusing the total educational experience on the student and his position in the world of work. Gysbers and Moore (1975) state that because of the increasing complexity of society, it is no longer possible to separate one role, event, or setting from another. Consequently, they propose that the meaning of career be expanded to include an individual's total life. Jones, Hamilton, Ganschow, Helliwell, and Wolff (1972) have included patterns of personal choice related to an individual's life style within the concept of career. These patterns involve occupational, educational, learning and social/personal behavior, social responsibility, and leisure activities. Career education is a far cry from the simplistic Parsonian version of vocational counseling which overemphasized self-analysis

and occupational information while underemphasizing the influence of personal values (Gysbers & Moore, 1975). In contrast, career education has been characterized as:

> the total effort of public education and the community aimed at helping all individuals to become familiar with the values of a work-oriented society, to integrate these values into their personal value systems, and to implement these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual [Hoyt, 1972, p. 1].

Marland (1972) states that career education provides not only training but the integration necessary for personal fulfillment. Super and Overstreet, as quoted by Hansen (1972) note that: "the model assumes that career development is self-development, that it is 'a process of developing and implementing a self-concept, with satisfaction to self and benefit to society [p. 243].'" Career development then can be viewed as an approach to career education which emphasizes ways in which counselors can become productively involved in implementing comprehensive developmental programs designed to meet the total needs of the student. Career development can be defined as: "self-development over the life span through the integration of the roles, settings, and events of a person's life [Gysbers & Moore, 1975, p. 648]." This is the conceptual framework for a life career development program. Activities are designed to aid students in gaining greater understanding of their growth and development in terms of their own personal goals, values, abilities, aptitudes, and interests. Within this holistic context the development of a positive self-concept and an adequate level

of vocational maturity are both interrelated and vitally important. Career development in this context: "is a significant part of human development and is closely related to the formation and implementation of one's self-concept [Thoni & Olsson, 1975, p. 672]." If career education is to remain relevant and viable, it must include a concern for the development of a positive self-concept, an examination of life styles and occupations, and an examination of the interplay between these factors in terms of self-concept (Ryan, 1975).

The major purpose of experiential education, regardless of whether it is labeled psychological education, career education, or life career development, is to increase the individual's intentionality. Ivey and Alschuler (1973) view this as a process whereby the individual is able to anticipate alternatives, choose, and obtain his chosen goal. Walz (1974) expresses this as personal empowerment. The empowered individual is able to develop insights and take charge of his life acting on the assumption that he can control his life/career by his actions. Bugental (1964) states that intentionality makes man's life purposeful and meaningful. Thus, man's conscious deliberateness is the basis for his identity and distinctiveness. This type of an individual approach to life is integrated, sequential, and process oriented. Exploration, experiencing, and flexibility are emphasized as means toward relevant choices. Futuristic attitudes and skills are an integral part of the life career development process (Walz, 1975). Thoni and Olsson (1975) have noted that: "since change is the only certainty in preparing the student to participate in a work society, planning for flexibility is essential [p. 672]." Toffler

(1970) has stated that: "for education the lesson is clear: its prime objective must be to increase the individual's 'cope-ability'--the speed and economy with which he can adapt to continual change [p. 403]." This investigation is concerned with evaluating a systematic counseling approach aimed at increasing individual intentionality.

Purpose of the Study

The present leaders in the student personnel movement have conceptualized the student as a whole person who is the central focus of the educational process (O'Banion, Thurston, & Gulden in Monroe, 1973). Wrenn in Monroe (1973) attributes this philosophical stance to the influence of Dewey, social psychologists, and existentialist thinkers who view man as an organismic unit. Regardless of the origins of this perspective, it is a fortunate one as far as the community college student is concerned. This student population, in particular, is in need of an approach which includes a full range of student personnel services. Monroe (1973) notes that:

> community-college students are generally thought to be more plagued with problems of emotional insecurity, with feelings of inferiority, with the absence of specific life goals, and less able to cope with the demands of the academic aspects of college life than are students who attend four-year institutions [p. 155].

Research has indicated that community college students: "have been found to average significantly lower in social maturity and autonomy or independence [Koos, 1970, p. 509]" than students at four-year institutions. Roueche and Kirk (1973) state that community college students: "are characterized by feelings of powerlessness,

worthlessness, alienation, and inappropriate adaptive behaviors--unrealistic levels of aspiration, lack of problem-solving skills and experiences, hostility, aggressiveness, and often delinquency [p. 69]." These same students typically lack social maturity, self-confidence, and autonomy. In general, they have a low self-concept (Astin, Panos & Creager, 1967; Collins, 1967; Roueche & Kirk, 1973).

These reports indicate a general trend in the literature which points to the need for innovative well-developed student counseling and guidance programs. Chickering (1974) has stated that commuting students have particular need for the type of experience which will allow them to learn more about themselves in terms of career possibilities. Medsker and Tillery (1971), in a Carnegie Commission Profile of two-year colleges, note that there are strong indications that community colleges have failed to offer programs relevant to student needs. The early college years are important in the development of self-identity:

> Since many community college students have not developed clear educational and vocational goals and are unusually vulnerable to interrelated financial, academic, and personal pressures, their guidance needs are particularly crucial [Medsker & Tillery, 1971, p. 63].

Collins and McConnell (1967) have stated that if community college students are to make vital choices wisely: "they must be assisted in identifying their abilities and aptitudes, in assessing their deficiencies and their potentialities, and in rationalizing their aspirations [p. 2]." In other words, it is the responsibility of the

educational institution to develop the overall consciousness of the individual. Reich (1971) states that:

> within the idea of consciousness is a person's background education, politics, insight, values, emotions, and philosophy, but consciousness is more than these or even the sum of them. It is the whole man; his "head"; his way of life. It is that by which he creates his own life and thus creates the society in which he lives [p. 15].

Brolin (1975) has indicated the role counseling centers can play in this process. A significant contribution can be made:

> by identifying special needs and assisting clients in moving toward occupations that will meet those needs. A primary need of many is to build self-confidence so that they believe they can be successful. Too many job failures result from job dissatisfaction due to a worker's having received poor guidance or having grabbed anything that was available [p. 689].

Wollman (1975) notes that a recent survey of two-year college students indicated that 63% were dissatisfied with the planning that had gone into their occupational choice. The need base is clearly defined and it points to the appropriateness of community college faculties leading: "in finding new ways to fit the pieces of human knowledge together, helping man to discover who he is and how he can help build a social order that fits him [Medsker & Tillery, 1971, p. 70]."

Although this need base has been clearly delineated, there has been a general lack of research concerning the adjustment of the community college student. Monroe (1973) remarks that although there

are many studies on community college students, for the most part, they are concerned with data dealing with age, sex, ability, transfer success, and enrollment. Few studies have provided insight concerning the student's attitudes, values, and personality. Koos (1970) has also remarked on the paucity of studies in this area:

> The need for guidance in respect to personal qualities and attitudes is less apparent because of the relative intangibility and the limited research concerning them, although these restrictions can hardly minimize their importance [p. 509].

Roueche and Kirk (1973) have specifically noted the lack of research dealing with the self-concept of the community college student. Monroe (1973, p. 179) considers the following questions to be critically in need of answers. How effectively does the community college prepare students to enter vocations? How effective are group sessions for improving student morale and self-esteem? A quality program of personnel services must include research and evaluation studies to determine the effectiveness of operating programs (Medsker, 1960; Monroe, 1973; Rainer, 1966; Yoder & Beals, 1966). This study will seek to implement a structured approach to life career development which will attempt to meet the needs of community college students by increasing their self-esteem and their level of vocational maturity. The effectiveness of this approach in terms of the previously mentioned areas will then be evaluated in some depth.

The Life Career Development System (LCDS) was designed and developed by Dr. G. R. Walz of the University of Michigan;

> The LCDS grew out of several years of research by the ERIC

> [Educational Resources Information Center] Counseling and Personnel Services Center . . . which focused on establishing objectives, evaluating current practices and programs, and using the resulting conceptual framework for designing a new methodology in career development. The design and preparation of the modules and other components in the system were undertaken by Human Development Services, Inc. [Walz, 1974, p. 4].

which has now made the LCDS available to various educational institutions. The basic goal of this approach is personal empowerment:

> More specifically, the LCDS builds upon the principle that career development should be concerned with the development of the total individual and encompass education, occupation, and leisure time. Career decisions and plans are, in reality, life decisions and plans; the two should not be considered separately, but as an integrated developmental sequence involving the goals, values, plans, and decisions of the individual now and in the future [Walz, 1974, p. 5].

The LCDS consists of nine career development modules dealing with the following areas:

1. Exploring Self
2. Determining Values
3. Setting Goals
4. Expanding Options
5. Overcoming Barriers
6. Using Information
7. Working Effectively

8. Enhancing Relationships

9. Creating Futures

Each module consists of six to nine sessions involving individual and group structured learning experiences. These modules are presented by a trained career development facilitator who may coordinate them in a flexible manner. This approach to life/career development is considered appropriate for a number of reasons. The learning potential appears to be excellent, although the approach is relatively new and reports to date have been largely impressionistic. The strategy seems well-fitted to the needs of community college students. The staff who will facilitate the program have all been properly trained and adequate physical resources are available. Furthermore, the strategy should complement and be compatible with existing programs (Miller & Benjamin, 1975).

Over 16 Virginia community colleges are currently utilizing the LCDS in their counseling programs. The State Department of Community Colleges has an overall coordinator and trainer of facilitators who is directly concerned with implementing the LCDS on a broader scale. It is obvious that the state has made a major commitment to the concept of life/career integration. Nationally, tentative reports at various levels indicate that this approach is a viable one well-founded on a humanistic base. What is now needed is comprehensive systematic evaluation of this promising strategy utilizing the most thorough methodology which can be practically employed at a given level. This study is an attempt toward this end. More specifically, the purpose of this study is to attempt to determine what effect a

structured life career development system has on community college students in terms of self-concept, vocational maturity, independent/ responsible behavior, and process orientation to planning as determined by external criteria. "Education, e-ducere, means to lead forth, to develop: in other words, to assist the individual to emerge in the adult world as an effectively functioning adult [Super, 1957, p. 85]." This investigation will attempt to determine if this system is of assistance in this process.

Statement of the Problem

This study will focus on the effects of the Life Career Development System (LCDS). The following areas will be examined: vocational maturity, process orientation to planning as determined by external criteria, self-concept, and independence and responsibility as determined by a significant other.

Vocational Maturity

A major purpose of the LCDS is to assist individuals in gaining insights and competencies which allow them to relate realistically to career development, thus facilitating independent planning and decision making. The modules encourage self-exploration from a number of perspectives contributing toward bringing about increased vocational maturity. Super (1957, p. 186) considers vocational maturity to be an adequate level of behavior with regard to chronological age which is manifested in coping with both broad and refined developmental tasks. Increased maturity in these terms is thus one outcome toward which the LCDS is directed. This program seeks to impart to the individual the process skills necessary to assist him toward this end.

Process Orientation to Planning as Determined by External Criteria

The LCDS is concerned with the development of the total individual. Career decisions and planning are not isolated events at some point in time (Ginzberg, 1952; Havighurst, 1952; Super, 1957), but should be considered as a developmental sequence involving the individual's goals, values, plans, and decisions now and in the future. An orientation which involves the individual fully in the decision-making process is a primary goal of the LCDS. This process orientation is closely linked to the whole issue of vocational maturity as decision-making which does not involve the total individual is unlikely to contribute to adequate levels of coping behavior. Super (1957) describes this process as the goal of vocational guidance involving: "helping a person to develop and accept an integrated and adequate picture of himself and his role in the world of work [p. 197]" in terms of his values, needs, aptitudes, interests, and emotions. Coopersmith (1967), in his study The Antecedents of Self-Esteem, concludes from an empirical base that individuals with low self-esteem: "lack the capacity to define and to deal with their environment but [that] they may learn to do so more rapidly and efficiently if they are exposed to [more effective methods of operating] [p. 263]." A process orientation to planning is felt to be an effective method of operating. Thus, this study will attempt to evaluate the effects of the LCDS in terms of this area.

Self-Concept

The preceding statement by Coopersmith (1967) implies that an improvement in operating efficiency may have some positive effect on one's self-esteem. Coopersmith confirms this in considering how self-esteem may be increased and stabilized (pp. 262-263). His findings also indicate that a structured setting, in which an individual is aided in examining his basis for evaluation in terms of his self-esteem and capacities, may be conducive to positive self-concept development. These conditions are all met in the LCDS. Therefore, an attempt will be made to determine if positive change occurs in this area. More effective behavioral skills, such as the LCDS attempts to impart, are generally thought to lead to improvements in self-concept. Roueche and Kirk (1973, p. 70) state that positive self-concept must be developed and that this can only occur as the student discovers he can do some things well. They feel it is the task of developmental programs to foster successful experiences which will lead to stronger self-concepts. Fitts (1965, p. 28) notes that positive experiences can be expected to result in enhancement of the self-concept and that there is considerable evidence that concepts of self do change as a result of significant experiences. Super (1957, p. 197) states that choice which is an implementation of self-concept aids an individual in becoming more integrated and adjusted, personally and vocationally. Thus, it is felt that the LCDS may have a positive effect in this area.

Independence and Responsibility as Determined by a Significant Other

The LCDS is oriented toward the basic goal of personal empowerment. If an individual feels he has power to take charge of his own life and if he acts on this belief it is thought that this behavior should be apparent to significant others in his life. This area relates directly to a positive self-concept. Persons who have low self-esteem are not likely to exhibit independent behavior. Coopersmith (1967) states: "independent behavior requires that the individual not only be convinced that his judgment is correct, but also be able to overtly express that conviction [p. 55]." Although all persons are to some extent under the influence of others, it is felt that the individual who is personally empowered is relatively detached from outside forces of appraisal, and relies more on himself in making decisions and taking responsibility for himself. In contrast, the dependent person is insecure, uncertain, and requires the: "reassurance of external confirmation and appraisal [p. 221]" for direction and decision-making. Coopersmith states that attitudes are generally integrated with behavior (p. 19). Thus, change in independent responsible behavior as perceived by others is thought to be positively related to personal empowerment and consequently will be examined.

Hypotheses

The purpose of this study is to determine what positive effect, if any, the Life Career Development System will have on community

college students in terms of self-concept enhancement, vocational maturity, independent/responsible behavior as determined by significant others, and a process orientation to planning as determined by external criteria. For research purposes, the following hypotheses were formulated.

1. There will be a significant difference in the group participating in LCDS training and the group not participating in terms of self-concept as determined by the following four scales of the Tennessee Self-Concept Scale (TSCS): (a) Total Score, (b) Identity or Self-Concept, (c) Self-Satisfaction, and (d) Behavior.

2. There will be a significant difference in the group participating in LCDS training and the group not participating in terms of vocational maturity as determined by the Attitude Scale of the Career Maturity Inventory (CMI).

3. There will be a significant difference in the group participating in LCDS training and the group not participating in terms of independent/responsible behavior as determined by a significant other utilizing the following scales of the Adjective Check List (ACL) (Gough): (a) Self-Confidence, (b) Personal Adjustment, (c) Autonomy, and (d) Change.

4. There will be a significant difference in the group participating in LCDS training and the group not participating in terms of a process orientation to planning as determined by content analysis.

For statistical purposes the hypotheses will be tested in the null form.

Theoretical Rationale

The theoretical base for this study is founded upon Super's (1957) premise that: "In choosing an occupation one is, in effect, choosing a means of implementing a self-concept [p. 196]." When this is taken into consideration, it becomes clear why the total person must be involved in career decisions and why these decisions are actually life/career decisions. An examination will be made of the theoretical background of self-concept development and vocational maturity as it relates to vocational adjustment. The relationship between these two areas, in terms of this study, is clearly developed by Crites (1969). He states that the success with which an individual is able to cope with his development by translating his self-concept into vocational terms indicates the extent of his vocational maturity. In the context of vocational development, maturity is defined in terms of behavior and adjustment in terms of outcomes (Super, p. 186). Independent/responsible behavior and a process orientation to planning will be evaluated separately in terms of instruments but with regard to theory they are considered to be subsumed under self-concept and vocational adjustment, respectively. This relationship has been delineated earlier in the section dealing with the statement of the problem.

Self-Concept

Perhaps, because of its subjective nature, self-esteem, self-concept, or self-attitude has been only recently investigated in any depth. This is surprising considering the theoretical centrality of this construct. Jersild in Hamachek (1971) defines the self as

> the sum total of all [man] can call his. The self includes among other things, a system of ideas, attitudes, values, and commitments. The self is a person's total subjective environment; it is the distinctive center of experience and significance. The self constitutes a person's inner world as distinguished from the outer world consisting of all other people and things [p. 8].

Coopersmith (1967) defines the self as an: "abstraction that the individual develops about the attributes, capacities, objects and activities which he possesses [p. 20]." These definitions provide some indication of the difficulty of dealing with this construct in a specific sense. Ultimately, theories of personality which utilize the construct of self must resolve within their frameworks certain philosophical questions concerning the nature of man and reality. A number of psychologists, sociologists, and philosophers have dealt with the self in one form or another.

In Hamachek's Encounters with the Self (1971) he reviews the following perspectives. Descartes mentions the cognito or self as the thinking aspect of man. Leibnitz and Locke examine the nature of the self and conclude that man is active and passive, respectively. W. James discusses three influences upon self-esteem. These influences involve the importance of a person's values and aspirations with regard to self-judgment and the value placed upon extensions of the self. Mead and Cooley relate self-evaluation to an internalization of the ideas and attitudes of one's social group.

Young (1972) notes that Freudian theory considers the self to be a differentiated system encompassing the id, super ego, and ego.

In this system the latter acts as a mediator with external reality. For Jung, however, the psyche or self is equivalent to the total personality.

Coopersmith (1967) states that Sullivan deals with the origins of a positive or negative self-concept as do Horney and Adler. Sullivan focuses on the importance of early family relations in particular, the interpersonal nature of self-esteem in general, and the development of coping mechanisms to deal with slights to the self. Horney discusses the consequences of basic anxiety in terms of self-concept and the defenses that consequently develop to deal with this anxiety. Adler mentions low self-esteem as an inevitable childhood occurrence which, with acceptance and support, can have a positive motivating effect.

Hall and Lindsey (1957) provide a number of diverse perspectives concerning the self by considering the following theorists. Erikson deals with personality integration and self-identity, especially in terms of the adolescent. This approach and that of other ego psychologists such as Hartmann and Jacobson relate to self-concept development, but this construct constitutes only one aspect of these theories. Sherif states that the self is a subsystem of the total psychological system. This view is basically the same as that of the gestalt psychologists Koffka, Kohler, and Lewin. Hilgard sees the self as simply one's image of himself. Murphy views the self as the individual as known to the individual. Combs and Snygg deal with a phenomenological self which is stable and develops from the total phenomenological field. This self is an individual's only frame of reference and consists of those experiences which are

characteristic of the person. Rogers also embraces a phenomenological orientation without the deterministic aspects of the self espoused by Combs and Snygg. Rogers' self provides an internal frame of reference which is differentiated from the phenomenological field and consists of conscious perceptions of the "I" or "me." Symonds views the self in terms of self-reaction to perception, cognition, values, and defenses concerning oneself. Lundholm makes a distinction between an objective and subjective self based on an external or internal frame of reference. Sarbin views the self as a cognitive structure concerning one's views of himself. Chein makes a distinction between the ego and the self based on process as opposed to awareness. Buhler distinguishes between a phenomenal self and a core self which is similar to Freud's ego. Allport describes a proprium or selfhood in his theory with self-esteem as an aspect which develops during the first three years of life. Angyal's symbolic self consists of the sum total of self-perceptions which may govern behavior. Maslow considers self-esteem to be a basic need which takes precedent over meta or growth needs. The preceding survey indicates the diversity and lack of consistency in the definitions and terminology applied to the self. Coopersmith (1967) concludes that there is no single theoretical context which treats self-concept centrally without surrounding it with vague or unrelated assumptions.

Counseling in its broadest sense is viewed by Arbuckle (1975) as a dichotomy between an existential humanistic orientation and a deterministic-based view of man. This proposed study will approach self-concept from the existential humanistic perspective. This

perspective is based on a philosophical foundation which stresses the individual's responsibility, awareness, introspectiveness, freedom to choose among alternatives, and self-defining nature. It also draws from phenomenology which views reality as a person's perception of an event. This means that man relates to all things on the basis of an internal frame of reference. Consequently, humanistic psychology is concerned with human interests and values as experienced by a total functioning person (Hamachek, 1971). Bugental (1964) delineates this frame of reference by noting the following:

> Man supersedes the sum of his parts.
>
> Man experiences his being in a human context.
>
> Man is aware of a continuity between the past, present, and future.
>
> Man has choice.
>
> Man is intentional.

This humanistic orientation is in keeping with the assumptions on which the LCDS is based and it does not conflict with Super's (1957) views concerning vocational maturity.

Finally, in developing this theoretical base, age must be considered. Drawing from a number of research reports, Thompson (1972) theorizes that age is an important variable in terms of self-concept development. There are indications that some change occurs in self-concept solely as a function of aging. This seems to be particularly true for young people under the age of 20. Consequently, Thompson stresses that age as a variable must be controlled in studies dealing with self-concept (p. 20).

Vocational Maturity and

Vocational Adjustment

Super (1957) states that:

> vocational adjustment is a function of the degree to which an individual is able to implement his self-concept, to play the kind of role he wants to play, to meet his important needs in his work and career [p. 300].

Vocational maturity relates directly to the preceding in that vocational adjustment is the outcome of an interaction between an individual's personal resources including vocational maturity and reality demands. Vocational maturity is: "conceived of as the degree to which abilities and traits have taken shape, providing consistent individual bases for action [Super, p. 188]." This study will approach vocational adjustment (outcome) from the perspective of vocational maturity (behavior and attitude). Super views vocational adjustment from a subjective perspective which is in keeping with the internal frame of reference discussed earlier in terms of self-concept. He hypothesizes that: "improvement in vocational adjustment can lead to improvement in other areas of adjustment [p. 300]." When the relationship between vocational maturity and vocational adjustment is considered it becomes obvious that this may have a bearing on this investigation in terms of the possible effects of adjustment brought about by the LCDS and its relationship to the self-concept and behavior of the individual. More specifically, Super states:

> one hypothesis is that, by relieving tensions, clarifying feelings, giving insight, helping attain success, and developing a feeling

> of competence in one important area of adjustment, the vocational, it is possible to release the individual's ability to cope more adequately with other aspects of living, thus bringing about improvement in his general adjustment. The second hypothesis is that this is best done by building on the individual's assets, by working with his strengths rather than with his weaknesses [p. 300].

The first hypothesis made by Super relates directly to that made by Jessie Taft in Dynamics of Therapy which states that a controlled relationship in which the client has a positive experience can have a positive effect on relationships outside the therapeutic situation. In other words, one aspect of social adjustment is thought to be related to an improvement in other areas (Super, pp. 300-301). The use of the LCDS in this proposed study would seem to fit nicely the conditions posited in these hypotheses. Super notes that although these assumptions are popular among counseling psychologists, they lack systematic testing to determine their relevance (p. 300).

To consider Super's (1957) view of vocational adjustment in some detail, it must be noted that the individual consists of a complex of aptitudes, interests, values, traits, and needs which are expressed through various outlets. These factors contribute to an individual's role aspirations. Particular situations such as one's job, home, community, et cetera, present the individual with role expectations. Adjustment depends upon how well the person is able to match or adjust aspirations and expectations. This involves personal resources, vocational maturity, and reality demands. If these factors

are in accord, the individual tends to be well-adjusted and satisfied. Adjustment has two basic aspects, personal and social, which are present in all the life situations in which an individual finds himself. Consequently, scales dealing with personal, family, and work adjustment are often related positively and significantly. Studies by Heron, Friesen, Inlow and Benassy, and Peinard in Super have all shown a relationship between vocational adjustment and general adjustment giving some indication of the accuracy of the previously mentioned hypothesis (p. 298).

As with self-concept, age must be taken into account when considering vocational maturity. Super (1957) states that: "vocational maturity may be thought of as vocational age [p. 186]." More specifically vocational maturity may be conceptualized as the developmental status of an individual's behavior in terms of age. With regard to Super's Life Stages, this study will be concerned with individuals in the Exploratory Stage (15 to 25) and the Establishment Stage (25 to 45).

Definition of Terms

To ensure clarity, the following definitions will be utilized in this study.

Self-Concept

Self-concept is a construct which includes the values, attitudes, and beliefs one has concerning oneself. These self-perceptions influence and, to some extent, determine an individual's behavior and view of his environment. Operationally, self-concept is defined as relevant scores on the Tennessee Self-Concept Scale.

Vocational Maturity

Vocational maturity is an age-related adequacy of behavior in terms of a person's work or career which is reflected in that person's attitudes. Operationally, vocational maturity is defined as scores on the Attitude Scale of the Career Maturity Inventory (formerly entitled the Vocational Development Inventory).

Independent/Responsible Behavior

Independent/responsible behavior is the expression of oneself based on an internal source of confirmation and appraisal. Operationally, this behavior is defined as specific relevant scales on the Adjective Check List as assessed by a significant other.

Significant Other

A significant other is one's spouse, parent, or close personal acquaintance.

Process Orientation to Planning

A process orientation to planning is a positive approach which incorporates those aspects of oneself and perceived external reality into an integrated framework designed to best accomplish one's purposes. Operationally, this process orientation will be defined in terms of evaluations based on content analysis of essays. These evaluations will be made by independent judges utilizing predetermined criteria.

Content Analysis

Content analysis is a method of observation which deals with communications in an objective and quantifiable fashion in order to measure variables. In this study this methodology will be applied to materials deliberately produced for analysis.

Plan of Presentation

This investigation will be presented in a sequential five-part organizational format with each part being designated as a chapter. Chapter 1 has dealt primarily with the introduction, statement of the problem, hypotheses, and theoretical rationale. Chapter 2 will deal with a review of related research. Chapter 3 will be concerned with research design and methodology. Chapter 4 will present an analysis of the results. Chapter 5 will conclude this investigation by summarizing the results, drawing conclusions, and making pertinent recommendations.

Chapter 2

A Review of Related Literature

This chapter consists of a review of relevant literature pertaining to: (1) group counseling, (2) the Life Career Development System, (3) self-concept, and (4) vocational maturity. Although the categories in this scheme are not mutually exclusive, they are considered to be sufficiently independent to warrant individual treatment in this review. Therefore, the chapter is divided into sections based on these four areas. This review incorporates a customized computer search conducted by the Educational Resources Information Center/Counseling and Personnel Services Information Center (ERIC/CAPS) as well as extensive library research.

Group Counseling

Group counseling has been operationally defined as:

> a dynamic, interpersonal process focusing on conscious thought and behavior and involving the therapy functions of permissiveness, orientation to reality, catharsis, and mutual trust, caring, understanding, acceptance, and support. The therapy functions are created and nurtured in a small group through the sharing of personal concerns with one's peers and the counselor(s). The group counselees are basically normal individuals with various concerns which are not debilitating to the extent of requiring extensive personality change. The group counselees may utilize the group interaction to increase understanding and acceptance of values and goals and to learn and/or unlearn certain attitudes

and behaviors [Gazda, Duncan, & Meadows, 1967, p. 306].

With regard to a theoretical base for group counseling, Arbuckle (1975) states that literary support can be mustered for practically any perspective or belief. He notes that this is in keeping with Zimpfer's view that:

> there probably cannot be a single theory of group counseling. There are too many philosophical positions about the nature of man, too many psychological bases for human growth and development and the ways by which change is effected, too many variations in counselor personality and style of functioning interpersonally, and too many possible ways for groups to form and develop uniquely for a singular group counseling theory [p. 141].

Arbuckle feels that a particular theoretical orientation or lack of one is very much related to the goals and methods applied to group counseling. Thus, lack of clarity in terms of theoretical orientation is seen as a major contributing factor to the inconclusiveness of current group counseling research. Gazda and Larsen (1968), in reviewing group research, note that other reasons contributing to this state of affairs include the following:

1. Variation in group size
2. Length and duration or intensity of treatment
3. Type and quality of treatment
4. Sophistication of research designs, instruments of evaluation, and test statistics.

Despite these limitations, Gazda and Larsen conclude that outcome research concerning group counseling generally looks promising as

approximately half of the studies they surveyed indicated positive change or growth.

Corsini's (1957) statements dealing with the general effectiveness of group therapy are in agreement with Gazda and Larsen's (1968) optimistic outlook concerning counseling research. Corsini writes that:

> there seems to be no question whatever that group psychotherapy is a valid method of treating individuals for internal and external problems. It is a procedure applicable to any kind of problem that is also treatable by individual psychotherapy. It is a more complex way of working with people, and yet, curiously, in some ways it is much easier, since the therapist's responsibility is divided among others. In a very real sense, every member becomes a therapist, and this duality of roles contributes a great deal to the progress in the group. We get by giving [p. 153].

After reviewing 60 studies which used group procedures with college students, LeMay (1967) concluded that the findings indicate: "that although the effectiveness of group procedures has not been empirically demonstrated with any degree of regularity, its potential has been demonstrated [p. 293]" by the positive nature of the reports. He cautions, however, that frequently, researchers have reported their feelings and not evidence. Wright (1959) has stated that the effectiveness of group counseling is improved when individual group members have a problem in common. This does not mean that the problem cannot be uniquely dealt with in terms of needs and solutions,

but simply that the group should focus on a single area of common interest. Warters (1960), on the other hand, feels that the goals of the group are simply the individual goals of the members within the group. Be this as it may, Lewis (1970) notes that group counseling is generally more likely to operate within a broad developmental framework as opposed to focusing on a particular individual within the context of the group. Operationally, this type of approach is seen as favoring Wright's position. Thus, as with theory, there is some question concerning the most appropriate means of arriving at the desired ends of optimum group effectiveness.

The preceding provides an indication of the global perspective in terms of general group effectiveness. More specifically, a number of studies have focused on the effectiveness of group counseling as compared with individual approaches. Bilovsky, McMasters, Shorr, and Singer (1953) investigated the effects of individual and group counseling on the realism of vocational choices of senior high school males. Approximately 58% of both groups made choices assessed as realistic. There were no significant differences found between experimental groups. Hoyt (1955) evaluated group and individual vocational counseling in terms of certainty, satisfaction, and realism of vocational choice. He determined that significant progress occurred under both methods. In examining the effectiveness of short-term group guidance and individual vocational counseling, Kemp (1962) found that both methods were more effective than no treatment in most areas. Hewer (1959) compared 48 college students who received group counseling with 45 college students who received individual

counseling and detected no significant differences after one academic quarter in certainty, realism, and satisfaction with vocational choice. Johnsgard and Muench (1965), in investigating a group therapy and a lecture approach in a mental hygiene setting, found positive change after a 15-week period, but no difference between groups on a psychological test battery. Baymur and Patterson (1960) discovered that both individual and group counseling sessions aided high school students in increasing their adjustment as indicated by Q sorts. Their increased adjustment was significantly greater than the control group. Wright (1959) reports that in independent studies Froehlich and Bailey observed no difference between individual and group counseling with regard to accuracy of self-knowledge in high school populations. Gearing (1970) assessed the effects of vocational group guidance and individual vocational counseling on the vocational interests and self-concepts of junior college students over a 12-week period. Findings indicated significant positive effects in both areas under investigation, but no significant difference between experimental treatments. In a study which focused on assessing the relative effectiveness of three group approaches in terms of the self-concept of black high school students, Jackson (1971) concluded that a racial context is no more conducive to producing change than more traditional group approaches.

In addition to the preceding studies, which generally indicate no significant difference between individual and group counseling approaches in terms of effectiveness, there are a number of studies which indicate that a group approach is superior in certain contexts.

Shaw and Wursten (1965), in a review of research on group procedures in the schools, report that Froehlich found group counseling to produce more significant increases in terms of accurate self-ratings among high school seniors than individual counseling. Bouchillon (1970) examined the effects on self-concept of client-centered counseling, group-centered counseling, individual reinforcement, and group reinforcement in a study involving 35 college students who met on a weekly basis for one semester. He discovered that group-centered counseling was the most effective in terms of changing the expressed self-concept of the students in a positive manner and that both group counseling approaches showed the greatest gains in mean terms, although the differences were small. Smith (1971), in investigating the relative effects of three treatment procedures on the vocational development of college students involved in a vocational guidance program, ascertained that the experimental guidance group showed the greatest increase in vocational development in comparison to both the individually counseled and the control groups. No differences were observed between male and female students. Lathey (1971) studied the effectiveness of marathon group counseling and traditional group counseling in terms of self-concept. There were 60 undergraduate students involved. The results indicated that traditional group counseling was the most effective in promoting positive change. Westbrook (1971) compared the effectiveness of three group vocational counseling approaches. His study involved 36 first semester college freshmen who met in eight weekly sessions which were directed toward individually selected vocational development goals.

The results indicated that all treatment groups progressed efficiently and consequently all three approaches were recommended. Males and females did not differ in terms of vocational goals. In a study of career counseling involving a group decision-making model and a traditional individual counseling approach, Shepherd (1973) found both methods effective in terms of increasing knowledge of career interests. Group counseling tended to be the most effective. The preceding provides some indication of the diversity of situations in which a group approach has proved beneficial in some respects.

In the Gazda and Larsen (1968) review of group research, they state that generally:

> In the "comparison" studies where individual counseling was compared with the effectiveness of group counseling, the outcomes were about even where one was considered superior to the other. The treatment most likely to produce growth indicated by the abstracted studies is the application of group counseling and individual counseling [p. 64].

In this review of group counseling, another relevant consideration has to do with the effectiveness of the structured group approach in contrast to the unstructured group approach. While a more or less nonstructured approach may be desirable in some exploratory contexts, the degree of desirability seems to be related directly to the goals of counseling. Thus, a brief examination of this area in terms of desired counseling outcomes is pertinent. LeMay (1967) reports that Gilbreath examined the effects of structured and unstructured group counseling in terms of the self-concept and ego strength of college

underachievers. The structured group experience was related to increased ego strength. Pinkney (1973) investigated combinations of structured, nonstructured, group, and individual approaches to vocational counseling with 52 clients at a university counseling center. He concluded that in terms of client satisfaction, structured counseling was best in general while in terms of effectiveness, the structured group approach was specifically superior. Levin (1973) examined the effects of a structured and nonstructured group experience on 41 graduate students. The results indicated that structured group participants developed more favorable attitudes and perceived greater self-change, solidarity, productivity, and unity than nonstructured group participants. Little impact on the self-concept of participants was noted. Berlin and Dies (1974) sought to determine the relative effectiveness of an encounter marathon and a subject-oriented marathon in terms of self-concept. Participating in the study were 25 undergraduates. The results pointed out that the subject-oriented participants experienced significant changes in self-concept.

This review will now focus on the general effectiveness of group methods in terms of self-perceived change and vocational exploratory activities. In Gazda and Larsen's (1968) appraisal of group counseling, they state: "self-concept improvement and related 'self' variable changes were reported in approximately 20 percent of the studies [p. 64]." Wright (1959) reports that Driver examined the usefulness of small discussion groups in bringing about greater self-understanding. The groups consisted of eight to ten persons and

involved 6 sessions over a 3-week period. Driver concluded that: "small group discussions carried on in a permissive atmosphere are an excellent learning medium for personality growth of high school, college and adult students [p. 554]." Caplan (1957) investigated the effects of group counseling on the self-concepts of high school boys. He detected significant differences between control and experimental groups indicating positive change in the latter. He concluded that group counseling is a useful methodology in an educational setting. LeMay (1967) reports that Anderson, in a study of group counseling with freshman college women, determined that no more than eight sessions can have a positive effect on personal-social problems. LeMay discusses an investigation by Williams in which it was hypothesized that an orientation group would have a positive effect on the number of perceived problems of college women. The results showed a decrease in problems in all areas considered among the experimental subjects. Shaw and Wursten (1965) report a study by Broedel who examined the effects of group counseling on underachieving, gifted adolescents. He found an increase in self-acceptance in the experimental group but no significant academic differences. Oliver (1970) attempted to determine the effect of behavioral group counseling during one semester on the self-actualization of college students. There were 24 students assigned to an experimental and a control group. The analysis of data indicated a significant difference between groups favoring positive personality trait change in the experimental group. Geisler and Gillingham (1971) studied the effects of a personal growth group

experience on 81 graduate and undergraduate students participating in 16 sessions. Evaluation of questionnaires and Q sorts indicated that personal adjustment improved significantly as a result of the group experience. In a study designed to determine the effect of a directed cognitive task within a group context, Snadowsky and Belkin (1974) determined that such a task can significantly affect the relationship between the self-concept and perception of undergraduates. White (1975) examined the effects of program participation in a community college growth group on self-actualization. Utilized in a study involving 128 students were two experimental groups and a nonequivalent control group. Data analysis indicated that experimental participants experienced increased identification with self-actualization including a higher regard for self. The expectations of the participants were not found to influence the outcome. The most productive leadership method was executive. Cuony and Hoppock (1954), one year after an occupational orientation course, followed up a group of noncollege preparatory students and discovered they were more satisfied, had been employed longer, and were earning more than a control group. In a second follow-up, Cuony and Hoppock found this positive difference was maintained over a 5-year period. Lowenstein and Hoppock (1955) investigated the influence of an occupational course on adjustment to college and occupational choice. They concluded that course participants were better adjusted as determined by a number of criteria and that they made occupational choices earlier in their college careers. LeMay (1967) reports that Biersdorf discovered significant differences between an "extended" treatment group and a control group of college students in

terms of reduced vocational problems for the treatment group. The study involved 71 male subjects drawn from introductory psychology and speech classes. Volsky and Hewer (1960) give a detailed statement concerning the rationale and development of a program of group counseling which is particularly relevant to this study. They write:

> The major goals of a group counseling program are understanding of self and understanding of self in relation to the educational and occupational world; the group situation has advantages over short-term individual contacts. For the student there are several benefits of group counseling, not possible in individual counseling. He is in a counseling situation with a professional person for ten hours rather than two or three; he has an opportunity to study his own problems as others explore theirs; he can compare his problems to those of others; he can gain a more sophisticated view of the occupational world as the vocational choices of others are examined; and the counselor can obtain a better understanding of him by observing him in a broader and more active social setting [pp. 71-72].

The authors report only impressionistic evidence in support of program effectiveness, however, citing the newness of the program as the reason for this state of affairs. Hanson and Sanders (1973) surveyed 297 senior high school boys and rated them in terms of realism and vocational choice. There were 30 extreme overshooters and 30 extreme undershooters involved in the study which compared individual counseling, group counseling, and controls. Although there were no significant differences between the counseled and the controls,

the author states that there was some indication that the group counseled overshooters and the individually counseled undershooters became more vocationally realistic. Healy (1974) reports on two evaluations of a career counseling procedure developed from Super's career development theory. Involved in one study were 28 community college freshmen while the second study involved 24 community college students. The first study was comprised of randomly selected students, the second of volunteers. Both studies utilized weekly meetings over a 5-week period. Evaluation of pre- and post-measures indicated that participants had made significant progress in terms of higher certainty, greater specificity of deliberation, and more occupational information. The author concluded that a theoretically defined approach dealing with career counseling can be adequately implemented by novice counselors. Thoene (1974) investigated the long-range effects of an occupational exploration program involving 81 participants. The program was directed toward senior high school students from smaller state high schools. A questionnaire with an 86% return indicated that a majority of respondents felt that the program had an effect on their career choices. The participants also indicated satisfaction with their occupational choices and felt that they had been aided in developing self-understanding in terms of a career.

The studies in the preceding section have dealt with group counseling outcomes roughly in terms of either self-perception or some aspect of vocational exploration. The following studies are particularly pertinent to this investigation in that they deal with both of these variables in the context of the same study and with

regard to group methodology.

Calia (1957) discusses a group counseling approach which incorporated didactic methods, group seminars, small group discussions, and individual counseling. This program was implemented in a junior college setting and involved three meetings per week over an academic year. Students were given three units of credit for participating. The program was organized around four major content areas. These areas were orientation, self-analysis, understanding self-analysis, and occupational planning. The author offers no experimental evidence concerning the effectiveness of this approach other than to state that the value of the program has been demonstrated longitudinally.

Crow (1973) examined the effects of a vocational exploration group on the self-esteem and vocational maturity of eleventh- and twelfth-grade students. Data were obtained for 90 subjects. There were 30 involved in the experimental group whose members participated in a programmed group experience which consisted of 27 specific career-oriented tasks (completed in a 3-hour period). A placebo treatment control group consisted of an equal number of subjects who participated in a semistructured group vocational counseling experience. A third group of 30 subjects made up a no-treatment control group. Subjects were given a pretest, posttest, and delayed posttest consisting in part of the Rosenberg Self-Esteem Scale and the Attitude Scale of the Career Maturity Inventory. Analyses of data indicated no significant differences between groups on either of the posttest mean scores. The experimental group and the placebo group did show

changes in the predicted direction on the Self-Esteem Scale. The author concluded that the programmed group has potential in terms of personality variables and it should be investigated further as a part of a regular educational program.

Gunter (1975) studied the differential effects of three types of group approaches on the self-concepts and vocational crystallization of community college students. Students uncertain about their vocational plans who had enrolled in a course in career planning were randomly assigned to four experimental groups. Each group consisted of 10 students. The career class group met for 12 hours over a 6-week period. The approach was primarily didactic with the counselor functioning as a lecturer. The career group also met for 12 hours over 6 weeks. In this group the counselor served as a facilitator emphasizing the students' self-determining nature. The multimedia career orientation group consisted of students independently performing assigned tasks using multimedia materials. The counselor acted primarily as a consultant. The control group received no treatment. The Tennessee Self-Concept Scale, the Kuder Occupational Interest Survey, and the Biographical Information Questionnaire were administered following treatments. The analysis of data indicated that the career group showed a significant difference in terms of self-concept on the subtest dealing with Personal Self. There were significant differences in terms of career crystallization on the measure of career certainty. The career group participants experienced the greatest increase in crystallization. The author observed that group career counseling with community college students can result in

increased career crystallization, a more positive self-concept, and a greater degree of satisfaction with career plans.

In summarizing this review of group counseling, the following points should be considered.

1. Although the research on group counseling is inconclusive at present, a number of studies indicate that this form of counseling has real potential, although there are qualifications.

2. There is considerable evidence that group counseling is as effective or more effective than individual counseling in a number of situations.

3. The structured group approach to counseling appears to be particularly relevant when the counseling situation involves clear goals and limited time.

4. Group counseling can provide an effective means of bringing about changes in the areas of self-perception and vocational exploration.

Life Career Development System

Very little empirical data is available concerning the effectiveness of the LCDS in a general sense, and even fewer reports deal with the system's effectiveness at a specific educational level. Much of the research that has been done at the community college level is in the form of unpublished institutional reports which are not widely circulated and not readily available even when their existence is known. Some of these reports have been made available to Human Development Services Incorporated of Ann Arbor, Michigan, the publisher of the LCDS, and have been acquired from that source. A

computer search by ERIC/CAPS in November of 1975 dealing solely with the LCDS and designed to be as broad as possible, located no references. Consequently, this section of the review of literature will be limited.

Walz and Benjamin (1974), in discussing the LCDS learning paradigm, state that the system is: "focused primarily on participant learnings and outcomes and is not process oriented in the sense of having activities and/or information sharing as its major concern [p. 73]." The conceptual basis for the entire LCDS approach stresses maximizing the potential for participant generalization, interest, and motivation. The learning paradigm is illustrated in Figure 1. Walz and Benjamin describe the LCDS learning mode as follows:

> Orientation involves introducing participants to the goals and objectives of each module, helping them to understand the relationship between what they will be learning and their own life career development, and explaining the position of the specific module in the total system. The facilitator briefly describes some of the activities and experiences that are in store in the module so as to generate anticipation and excitement on the part of the participants.
>
> Experiencing involves putting individuals into situations wherein they actually experience life career development tasks and problems. Through examining case studies, role playing, and a number of other activities built around their own concerns as well as those of others, they draw inferences and make generalizations regarding the meaning of what they have experienced.

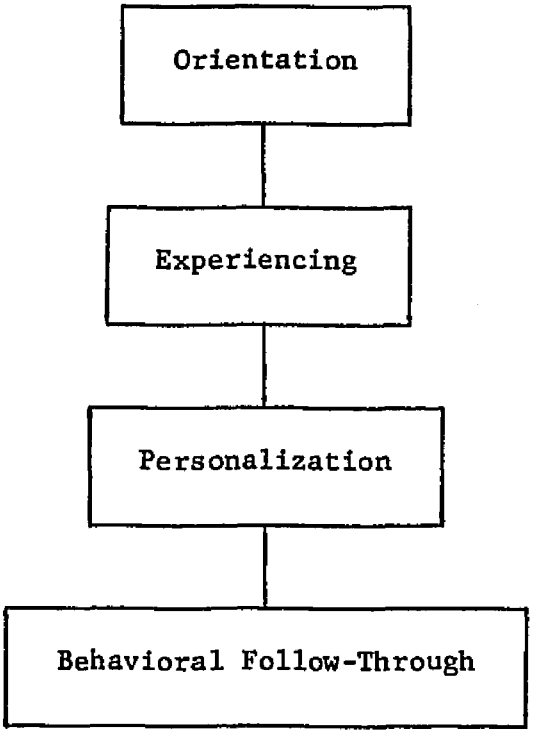

Figure 1. Learning paradigm.

> Personalization becomes inevitable as participants apply what they have learned to their own situations, deciding what the learning means for them as well as its implications for the present and the future. Through specific goal-setting procedures they determine goals and objectives that will bring personal satisfaction in the future according to their own needs, values, and life style preferences.
>
> Behavioral follow-through gives participants the opportunity to try out new learnings and competencies in situations away from the original setting . . . Feedback is encouraged, and participant sharing is a vital part of the module experience [pp. 73-74].

The LCDS is reported to be unique for a number of reasons; some of those considered most important are enumerated following:

1. Past experience is not important in facilitating the use of the modules.

2. The LCDS is designed to clarify attitudes, values, and goals and to build competencies.

3. The system is adaptable and flexible.

4. The system is easily adaptable to existing programs and practices in career development [Walz & Benjamin, 1974, pp. 77-78].

Many of the progress reports made available to Human Development Services are testimonies in which participants are quoted briefly in response to various questions. In other reports percentages are determined for categorical responses. These types of reports provide the reader with a general impression of the participants'

perspective and little else. The reports are generally positive. Consequently, no attempt will be made here to comprehensively deal with them. Examples of both types of reports are given following (provided by G. R. Walz in personal correspondence):

Any comments you would like to make about the course?

I liked the course because it did make me aware of things about myself I never really thought about like my own goals and limitations.

The course was interesting, it made me feel that I wasn't the only one with career conflicts and decisions.

I liked the course because I got to know alot of new people and started to realize all of the different values that different people have.

When undecided you start to think about possibilities.

Students responded to the item "I am now setting more:"

General goals	15.4% responded
Specific goals	76.9%
Short-range goals	53.8%
Long-range goals	30.7%

"I feel I am better able to relate regarding:" as a result of the LCDS experience,

People	92.3% responded
Data	38.5%
Things	46.2%

Snead, Diment, Hummel, Marshall, and Thorpe (1974) discuss the development of a community college life career planning program

which ultimately incorporated the LCDS in a comprehensive institution-wide program. They concluded that the 3-year developmental endeavor had "gleaned success." "The successes are tabulated in the many students who express their growth by words or actions. 'I understand myself better as a result of understanding others [p. 40].'" The authors note that the one aspect of the total program that showed the least innovation was the evaluation procedure for both program and participant.

Seward and Wilkinson (1975) evaluated the effectiveness of the LCDS at Central Virginia Community College in Lynchburg, Virginia. In this setting, the LCDS was offered as a 3-credit, 1 quarter course, which focused specifically on self-understanding and career decision-making. The course was directed toward students: "who were undecided about career choice and who needed help in self-understanding and value clarification [p. 3]." Students in this category were screened by the counseling center and encouraged to enroll in the course. There were 20 students who completed the course which was graded on a contract basis. At the end of the course students evaluated the sessions. A rating scale questionnaire utilized in the evaluation indicated that the sessions were all helpful and that most students viewed the course favorably. Discussion and role playing were reported as the most popular learning modes. The authors recommended that enrollment be limited to approximately 20 students per class, that students should be as diverse as possible, thereby adding to the richness of the class, and that suitable modification be made in LCDS material to accommodate older students.

Seward and Wilkinson concluded that the course should be continued and that it should be evaluated using an experimental and a control group.

Rodebaugh (1975), in a paper presented at the annual meetings of the American College Personnel Association and the American Personnel and Guidance Association, reported on "Life Career Potentials, A Process Utilizing the Life Career Development System with Community College Special Needs Students." In her overview of the problem she noted the paucity of career development studies at the community college level before going on to describe a pilot use of the LCDS in two sections in a community college setting. The 7-module program was intended to serve 40 students per semester who were granted 2 hours of academic credit. The first semester 92% of the students completed the program. The nonstandardized LCDS pre-post evaluative instrument indicated that the most significant areas of change were decision-making and goal-setting, coping with environmental barriers, and efficiency. A postprogram survey determined that 75% of the respondents felt the LCDS program should be expanded.

Jennings and Walters (1975) describe a career development program in a community college setting which is based on the assumption that there are four major aspects of the career developmental process. These include self-awareness, occupational awareness, career selection, and reality testing. The LCDS has been used to facilitate the self-awareness aspect within this program by utilizing primarily the exploring self module. Although all of the results from different sections have yet to be tabulated, the authors, utilizing the LCDS

evaluative measures and experimental and control groups, concluded that the Life Career Development System is an effective instrument to explore self-awareness among community college students. They report that they are currently investigating the effectiveness of the system with specific age groups and they state that age is a factor that should be considered when reviewing outcomes. However, in closing they caution that the nonstandardized pre- and post-evaluative measures they used may be too subjective to be valid instruments in assessing the effects of the LCDS.

In summarizing this review of the LCDS in terms of community college students, it seems appropriate to consider Benjamin and Walz's (1975) statement that initial data seems to indicate that the LCDS is an effective vehicle for positive personal growth although it is only now in the process of being formally evaluated (p. 59).

Self-Concept

Chickering (1974) drew findings from the American Council on Education's research program dealing in part with the influence of different college environments on student development and ascertained that there is a relationship between commuting students and self-perception and long-range goals. In brief, he states that:

> after differences in background characteristics and differences in self-perception at entrance are taken into account . . . the self-esteem of these commuting students suffers in comparison with their residential peers. These shifts in self-esteem are accompanied by similar shifts in long range goals [in that the commuting students'] commitments to a wide range of long range

goals diminished [p. 67].

Chickering states that the results of this study are easily summarized because they are so consistent. In terms of skill areas, resident students generally rate themselves higher than commuters. In terms of personal characteristics such as intellectual and social self-confidence, popularity, understanding others, sensitivity to criticism, defensiveness, stubbornness, and cheerfulness, resident students also rate themselves higher than commuters (p. 74).

With regard to self-concept and age, Thompson (1972), in dealing with correlates of the self-concept, writes that: "in terms of self-concept development, it is clear that certain systematic changes occur simply as a function of time or increasing age [p. 21]." He goes on to note that while it is possible that longitudinal studies might indicate other relationships, the absence of these studies forces us to consider that certain change is age-related. Thus Thompson concludes on the basis of empirical evidence that:

> age is an important variable in accounting for individual differences in self-concept [although] these findings are certainly not final. Consequently in terms of research age becomes a variable that must be controlled or dealt with in some fashion [p. 20].

This review will now focus briefly on perceived change in terms of self-concept. Nemecek (1972) studied the effect of a human potential seminar on 26 college underachievers as determined by the Personal Orientation Inventory. He found a significant positive difference in terms of self-regard, but concluded that due to the

number of hypotheses this difference could possibly be attributed to chance. Garrison (1972) sought to determine the effect of short-term counseling dealing with career planning on the self-concept of university students. This study was based on the assumption that defined goals in terms of a life career plan are related to a positive self-concept. An experimental and two control groups were evaluated with the Tennessee Self-Concept Scale as well as other instruments. The results indicated that the experimental group significantly increased their mean self-concept level and retained this gain for a number of weeks following counseling. The author concluded that career development counseling had a positive effect on self-concept. Wildblood (1972) utilized the TSCS among other instruments to determine the relationship between a structured encounter group experience and reported self-concept in college females. He observed that an experimental group showed significant increases in terms of self-concept, self-acceptance, and personal self. External rating scores also indicated a significant increase for the experimental group. Zongker (1973), in investigating the effect of differing group counseling approaches on the self-concept of student teachers, discovered that a structured group approach was effective in bringing about a more definite, open, assertive perception as determined by the TSCS. Cordell (1973) was interested in the effect of structured group counseling on self-concept as well as several other variables. Using the TSCS, the author detected positive significant changes in self-concept. He also found group counseling to be equally effective with males and females. Mackeen and Herman

(1974) used the TSCS in assessing the effects of group counseling on the self-esteem of three groups of adult females. They learned that in one group whose members had no distracting crises to deal with, positive significant change was brought about. The effects of participating in a self-exploration group in terms of self-acceptance were studied by Woodhouse (1974). He used Berger's Acceptance of Self and Others Scale to evaluate two experimental and one control group of college undergraduates. The conclusions were that this type of group activity can facilitate positive self-acceptance and that there is evidence that this change is maintained. Meyer (1975) investigated the effectiveness of a human development course in terms of the personal growth of community college participants. He used a nonequivalent control group design and the TSCS as well as other instruments. Findings indicated significant increases on 10 of 12 TSCS scores for the experimental group and no significant increase for the control groups. The conclusions were that a human development course can have an effect on the self-esteem, definiteness about self, and sense of purpose of college students. Willing participants are viewed as the most likely to profit from such an experience. In closing, Meyer noted that a course on identity clarification and life planning can be useful in meeting the personal growth needs of college students.

The following studies deal with behavioral change in terms of self-concept. Using Q-technique, Caplan (1957) studied the effects of group counseling on high school boys' self-concepts and discovered nonrandom increases in self and ideal self correlations in his

experimental group. He hypothesized positive behavior change and observed an expected nonrandom decrease in the number of classes where poor citizenship grades occurred. Broedel, Ohlsen, Proff, and Southard (1960) investigated the effects of group counseling on gifted underachieving adolescents. They hypothesized that group counseling would improve participants' ability to relate to others while increasing self-acceptance. The authors concluded that there was a significant gain in self-acceptance and that positive behavioral changes occurred in students who participated in group counseling. Hamilton (1971) in investigating changes in self-perception resulting from a small group laboratory experience hypothesized that the self as seen by others would be affected by the group experience. The evidence indicated that a change in the discrepancy between actual self and self as seen by others was related to the group experience. In a study of the effects of group counseling upon community college students living at home, Kyser (1971) ascertained that self-referred students meeting for 16 weeks showed a change in attitude toward themselves and their parents. He further ascertained that group counseling had a positive effect on the students' behavior in terms of decision-making, coping activity, discussion, and expression of feeling. Consequently, he concluded that attitudes and behavior of participating community college students can be positively effected by group counseling.

Aside from the preceding, a number of writers have linked self-concept with behavior in various ways. Fitts (1972), in a review of self-concept and performance, draws from a number of studies to

conclude that: "one's current behavior is a strong influence on his present self-concept [p. 69]." He states that interaction studies indicate that: "the self-concept [can] be changed significantly over short periods of time by varying kinds of systematic reinforcement [p. 69]." Fitts further states that the statement: "the more optimal the self-concept the more effectively the individual will function carries [with it] the implication that improvement in the self-concept will result in improved behavioral performance [p. 72]." A closely related relevant area concerns the relationship between self-concept and occupation. Fitts states that:

> there is some tentative evidence that the self-concept is influential in vocational choice. There is also a rather clear picture of an interaction relationship between the self-concept and work. The individual's self-concept is a partial predictor of the caliber of his job performance and the self-concept, in turn, appears to be affected by the nature and quality of his work [p. 74].

Leonard, Walsh, and Osipow (1973) found that persons high in self-esteem make consistent second vocational choices in terms of their personality style more often than persons low in self-esteem. Walsh and Osipow (1973), in a study dealing with career preferences, self-concept, and vocational maturity, defined congruent, incongruent, and undecided college students utilizing the Vocational Development Inventory. Results indicated that congruent males and females report more specificity in terms of occupational planning and implementation than do incongruent and undecided students. It is concluded that

this supports the theoretical assumption that congruency is related to vocational stability and vocational maturity. Korman (1967) observed that self-esteem acts as a moderator in terms of occupational choice. High self-esteem students are more likely than low self-esteem students to choose occupations perceived to require high abilities. Greenhaus (1971), in investigating self-esteem as an influence on occupational choice, discovered that individuals high in self-esteem are internally oriented in terms of evaluation of satisfaction while low self-esteem individuals are externally oriented. In a study of personality variables related to the career decision-making abilities of community college students, Wigent (1972) detected no difference in freshmen and upperclassmen in the ability to determine career goals and no difference in terms of sex. He did find that individuals with more positive self-concepts are more likely to have decided early on career goals.

In summarizing this section on self-concept, the following points should be noted:

1. Community college or commuting students apparently differ from their residential counterparts in terms of self-concept and goal-setting behavior.

2. At the present time the accumulated evidence indicates that certain changes in self-concept may be age-related; consequently, age as a variable should be controlled in research dealing with self-concept.

3. Perceived change in self-concept can occur after relatively short periods of relevant intervention.

4. Changes in self-concept are often accompanied by behavioral changes. The evidence seems to suggest that behavior influences self-concept and self-concept in turn influences behavior. More specifically, this relationship apparently encompasses self-concept and the occupational aspect of an individual's life.

Vocational Maturity

Anderson (1969), in a review of group counseling and related research, states that:

> vocational maturity and group counseling are not single, clearly understood entities. More attempts to induce vocational maturity through some generalized form of group counseling are clearly not needed. What is needed are multivariate projects which utilize multiple outcome criteria and differential treatments [p. 216].

Malacos (1975) notes that community college counselors must deal with a large student body with varied interests, goals, and achievement capacities in an educational environment that offers a diversified curriculum, thereby adding to the difficulty of career development. Despite the obvious need for research and reports at this educational level, Malacos states that there has been a paucity of literature relating to career development experiences involving community college students. The need for concern with this aspect of community college counseling is underscored by Super's (1974) statement:

> that the vocational development of the majority of young men in their early twenties has not reached a degree of maturity which permits vocational commitment underlines the importance both of

> maturing experiences and of methods of assessing the degree of vocational maturity attained when planning further exploration and when arriving at decision points. [This individual variance] in vocational maturity, in the planfulness of [an] approach to life, in [a] tendency to anticipate choices, . . . in [an] exploration of alternatives, and in [a] tendency to acquire relevant information, suggests that educators need data on these characteristics when planning curricula, researchers need them in evaluating programs, and counselors need means of assessing these characteristics as a preliminary to educational and vocational counseling [p. 21].

Webber (1973) discusses procedures and techniques reported by community college counselors to be especially effective in working with post high school students. Areas outlined include personal career needs, self-concept development, career exploration, and career planning all designed to aid participants in developing a "process" orientation to career development. Gribbons and Lohnes (1968), in a study on career development sponsored by the U.S. Office of Education, report that positive attitudes, self-understanding, and confidence and the integration of self-concept into career choice are the foundations for vocational success. Their longitudinal study initially involved 110 junior high school students and followed them from eighth grade to 4 years after high school with data collected every 2 years. The vocational maturity of the students was a primary area of focus at grade 12. The preceding gives an indication of the need for career development experiences at the community

college level.

The following deals with the relationship between vocational maturity and age, sex, and socioeconomic level. Crites (1973) states that: "vocational behavior matures for most individuals as they progress from late childhood through adolescence to early adulthood [p. 5]." "Implicit in the concept of career development is the assumption that vocational behaviors mature over time in a systematic fashion [p. 7]."

> Any measuring device which purports to assess a developmental variable such as vocational maturity must yield scores . . . which either increase or decrease with age . . . The scores may not correlate with age across the total span of development because certain behaviors may mature only at given times . . . but during periods of change the scores should be systematically related to age [p. 7].

An individual's vocational maturity can thus be defined in terms of his chronological age and expected life stage or in terms of the coping behavior of others dealing with the same developmental tasks according to Crites. Super (1974) states that:

> maturity is best defined as the repertoire of coping behavior leading to outcomes, compared with the behavioral repertoire of the peer group thus making it a developmental rather than an outcome construct. The degree of maturity . . . determines in part . . . adjustment, for adjustment requires an appropriately developed behavioral repertoire for satisfactory outcomes [p. 11].

Maturity is thus the: "extent to which an individual has mastered, relative to his peers, the knowledge, attitudes, and skills required for successfully coping with career planning and implementation [Hilton, 1974, p. 145]."

Sheppard (1971) designed and administered an adult vocational maturity inventory developed to deal with past vocational decisions. From his results he concluded that vocational maturity can be measured quantitatively in adults and that vocational maturity can continue to develop in adults. Zelkowitz (1975) constructed and validated a measure of vocational maturity for adult males (developed from the Career Development Inventory). She learned that scores tended to conform to Super's life stage development theory. Positive relationships were discovered between maturity scores and satisfaction. Graves (1974), in a study dealing with vocational maturity and college students' certainty and commitment to career choice, found higher levels of maturity to be positively related to certainty. He also detected a significant expected difference in the vocational maturity of sophomores and juniors. Hall and Mansfield (1975) studied the career experiences of a group of engineers and scientists and discovered age was related to job involvement, satisfaction, and self-image. Based on their findings, the authors concluded that developmental career stages existed and each could be characterized differently.

With regard to differences of sex and/or social level in terms of vocational maturity, Crites (1974) reports that in standardizing the Attitude Scale of the Career Maturity Inventory, these differences were found to be "negligible" (p. 29). Consequently,

he concluded that this scale was applicable to all social strata and both sexes. In the Genessee County study involved with validating the Career Development Inventory, Super (1974) reports no significant differences between the sexes on any scale. In a study of the self-concept of occupational ability and related characteristics in community college students, Oman (1971) found no significant difference between high and low socioeconomic groups. Crites (1973) presents the research studies of Cover (1968) with high school students, Harris (1966) with college students, and Miller (1968) with American Indian youths to support his conclusion that socio-economic status is not related to vocational maturity as measured by the Attitude Scale of the Career Maturity Inventory.

This review will now focus on reported change in vocational maturity brought about by purposeful intervention. Harmon (1974) notes that the measurement of increased vocational maturity is based on the following assumptions:

1. that "vocation" is an important organizing force in human life

2. that individuals have some control over the choices they are offered

3. that the process of acquiring vocational maturity is amenable to intervention by the counselor

4. that the behavior measured is related to significant non-test behavior [p. 84].

Crites (1973) states that differing types of counseling experience as a direct means of bringing about increased career

maturity have produced mixed results. He cites experimental studies by Asbury (1967), Bovee (1967), and Gilliland (1966) (all of which indicated that the CMI Attitude Scale scores were higher for counseled than noncounseled students) in supporting his conclusion that counseling can positively affect the attitudinal aspect of career maturity. Goodson's (1969) findings strengthen this conclusion. He examined three vocational guidance approaches in terms of the CMI Attitude Scale to determine their effects on college students. The three experimental groups all showed significant gains in vocational maturity relative to a control group. Jackson (1971), in a study with less positive results, sought to determine the effect of a formal program of career exploration on the vocational maturity of college freshmen. He ascertained that although there was positive movement toward greater career maturity as determined by the Career Maturity Inventory, the movement was not statistically significant. Positive attitude and interest in the program was noted among participants. In a study concerned with the development of a community college group vocational counseling procedure, Fogel (1973) discovered that a replicable approach stressing vocational implementation of self-concept and a future-oriented decision-making strategy was effective. Results indicated a significant increase in vocational decision-making knowledge and vocational problem-solving ability in counseled subjects. No differences based on sex were found among participating students. Feldman (1973) investigated the effects of a career planning experience on the vocational maturity of inmates in a penal institution and observed

a significant increase in the maturity level of participants. He concluded that a short-term learning experience can benefit adult inmates in terms of increased vocational maturity as determined by the Career Maturity Inventory. No significant changes were noted in self-concept between participants and nonparticipants in this setting. English (1974) compared two methods of disseminating occupational information hypothesizing that they would both positively affect the vocational maturity of senior high school students. The Career Maturity Inventory indicated that both systems had a positive impact on the vocational maturity of the involved students. No differences were detected between male and female participants in terms of vocational maturity. Myers, Lindeman, Thompson, and Patrick (1975) compared 792 high school students who had spent an average of 3 hours each on a computer-based career exploration system with a control group of 1,453 comparable students. The users showed positive gains in vocational maturity, specifically in planfulness and knowledge and use of relevant resources, but not in terms of information. Positive gains were related to time spent using the system. No differences were found between males and females. Utilizing the CMI, Flake, Roach, and Stenning (1975) investigated the effects of short-term counseling (6 weeks) on the career maturity of tenth-grade students. They concluded from the results that career maturity as a developmental process can be fostered by counseling in an educational context.

In considering the components of vocational maturity, Harmon (1974) states that although attitude and competency aspects can be

differentiated it seems possible that: "attitudes exert limiting influences on overall maturity which can negate any advantage an individual may possess in the area of competency [p. 85]." Speaking to this same issue, Hilton (1974) writes that:

> the affective-cognitive distinction frequently made in the labeling of the measures and in the manuals describing them is probably overdrawn. Attitudes depend on learning, and learning about an activity . . . is influenced by one's attitudes. Thus attitudes have a cognitive component and vice versa [p. 151].

If the accuracy of the preceding is verified, there should be an interrelationship between the dimensions of attitudes and competencies as Crites (1973) hypothesizes in his model of career maturity. The cognitive-competency aspect of career maturity is defined by Crites as consisting of the following variables.

1. Self-knowledge: "the expectation is that more vocationally mature individuals will have thought more about their vocational assets and liabilities and will have greater self-knowledge [Crites, p. 23]."

2. Knowledge of job options:

> much as the individual learns more about himself as he grows older, he also gathers more information about jobs and occupations. Consequently, accuracy and extent of job knowledge should differentiate the more from the less vocationally mature [Crites, p. 24].

3. Goal selection:

> The more vocationally mature person not only has greater knowledge

about self and work but relates one to the other. He has thought about how his capabilities relate to the demands and requirements of jobs [and he uses this information in occupational choice making] [Crites, p. 25].

4. Planning: "the tendency of the individual to think about the means which are necessary to attain a desired end . . . as the individual becomes more vocationally mature he should relate means to ends more frequently [Crites, p. 27]." In a study involving 17 junior high school boys, Super and Overstreet (1960) determined that the planning dimension of career maturity was the most significant single factor.

5. Problem-solving: "the most effective response would be one which would best resolve this problematic nature of the situation, and also tend to maximize other positive consequences . . . and minimize negative ones [Crites, p. 28]."

A number of studies have been concerned with the relationship between self-concept and vocational maturity. Isabelle and Dick (1969) investigated 74 male undergraduates in terms of clarity of vocational self-concept. The author compared subjects cross-sectionally and longitudinally and observed that the high clarity students were more effective in eliminating occupational preferences and were more congruent in self- and occupational-descriptions than low clarity students. In a study involving vocational crystallization and self-esteem in college students, Resnick, Fauble, and Osipow (1970) concluded from an assessment of 216 undergraduates that a positive relationship between certainty and self-concept existed. The

relationship was the same for both sexes. Bujold (1972), in an investigation concerned with the role of self-concept in occupational choice, studied French Canadian school boys and found partial support for the hypothesis that as an individual matures, he increasingly translates his self-concept into an occupational context. In an investigation of self-concept and vocational maturity in young women, Putnam and Hansen (1972) utilized the TSCS and the CMI among other instruments in evaluating 375 females. They concluded that self-concept was significantly related to vocational maturity, thus supporting Super's theory of career development and demonstrating its applicability for females. Self-concept was seen as useful in predicting levels of vocational maturity. Maier and Herman (1974) studied the vocational decidedness of college freshmen in terms of self-esteem. They determined using the TSCS that the vocationally decided and undecided come from unique populations in terms of self-esteem.

In summarizing this section on vocational maturity, the following statements seem justified.

1. There is an apparent need for career development programs at the community college level.

2. Vocational maturity is related to age as it is by definition a developmental phenomenon; consequently, age as a variable should be controlled in research dealing with this construct. Sex and socioeconomic status are apparently unrelated to vocational maturity.

3. Reported change in vocational maturity can occur in some

cases after relatively short periods of appropriate intervention.

4. A planning orientation is apparently an important aspect of vocational maturity. Attitude and competency dimensions of the construct vocational maturity are possibly related in a positive manner as hypothesized.

5. Self-concept and vocational maturity are evidently related positively.

Summary

In conclusion, the literature cited in this entire chapter provides considerable support for the following general summarizations. Group counseling has proved to be a relatively effective method in a number of contexts. As a form of group counseling the LCDS seems to be a promising approach which needs further investigation at the community college level. Community college students differ from their peers in other educational settings in terms of self-concept and could benefit from positive growth in this area. Career development programs are needed by the community college student population. Finally, positive change in both self-concept and vocational maturity can apparently occur after appropriate intervention.

Chapter 3

Methodology

This investigation was instituted in order to assess the effects of the Life Career Development System (LCDS) on certain predetermined aspects of the self-concept and the vocational maturity of community college students. Chapter 3 presents the research procedures and methods utilized in this study. Specifically, this includes the following: (a) population, (b) research design, (c) instruments, (d) procedures, and (e) statistical methods.

Population

The subjects for this study were beginning community college students who indicated a desire to explore the vocational options available to them in a group counseling context by enrolling in General 108--Career Education and students enrolled in Psychology 202, an elementary course in general psychology. The subjects were drawn from Thomas Nelson Community College (TNCC) in Hampton, Virginia, during the winter quarter (January 5 through March 19) of 1976. TNCC is a two-year institution within the state-wide system of community colleges. The college is centrally located, in a geographic sense, on the metropolitan peninsula bordered by the James and York rivers. There are presently approximately 5,000 students enrolled with a mean age of about 28 years. The population is 51% male and 49% female (Virginia Community College System, 1974). Initially, 32 students were enrolled in the career education class

and an additional 35 students voluntarily agreed to participate from the general psychology class. Only a general attempt was made initially to equate the two groups numerically as attrition is common within this educational setting and was anticipated. The career education group was composed of 19 males and 13 females who ranged in age from 17 to 47 years with a mean age of 25.4 years. The general psychology group was composed of 10 males and 25 females who ranged in age from 18 to 39 years with a mean age of 24.8 years. Thus, initially, the total number (N) was 67 at the beginning of the quarter.

Research Design

This investigation utilized a Compromise Experimental Group-Control Group design (Kerlinger, 1973, p. 342).

Yb X Ya (Experimental)

Yb ∿X Ya (Control)

This design was necessary as it was impossible to randomly assign subjects to groups in the setting in which this research was carried out. This was the case because of the nature and focus of the counseled groups. Lewis (1970), in considering methodological problems in counseling research, noted that motivation for counseling is a necessary condition of primary import and that it is

> difficult to approximate a true counseling situation without a motivated client. Since counseling is goal directed, a counseling situation involving a client with no counseling goal is hardly an appropriate test of the effectiveness of counseling [pp. 204-205].

Axmaker (1970), in investigating the effects of group counseling on community college students, utilized randomized experimental and control groups in his research design and found no difference between groups in terms of motivation and self-concept. Consequently, he recommended that interest in counseling be taken into account in the selection of subjects in future studies. Lewis (1970) stated that to deny counseling among those requesting it for the purpose of establishing a motivated control group is highly questionable on ethical grounds although not technically unethical. Taking these two considerations into account, the design selected and used was considered to be appropriate and justified in terms of the stated problem.

This pretest posttest design involved treatment and no treatment for the experimental and the control groups, respectively. Treatment, the active variable, consisted of the following LCDS modules as described in Chapter 1: Exploring Self, Determining Values, Setting Goals, Expanding Options, Overcoming Barriers, and Using Information. These modules were introduced to the experimental group during an 11-week period. The control group proceeded solely with routine class work during this same period.

Hypotheses

Hypotheses 1, 2, 3, and 4 stated that students who participated in LCDS training would be significantly and positively affected in terms of self-concept, vocational maturity, independent/responsible behavior, and process orientation to planning as determined by: select scales of the TSCS, the Attitude Scale of the CMI, select

scales of the Adjective Check List, and content analysis of written self-descriptive essays. For statistical purposes, these four research hypotheses can each be expressed in the following forms:

H_1 : The experimental and control groups means are not equal.

$$A_1 \neq A_2$$

H_0 : The experimental and control group means are equal.

$$A_1 = A_2$$

Statistical tests of significance concerning the stated research hypotheses and the related null hypotheses involved one-way classification analysis of covariance (see Figure 1). The effects of the LCDS, the independent variable, were determined by comparing the experimental and control groups. In all cases age and appropriate pretest scores were used as covariants in order to control for initial inequalities in these areas.

Assigned Variables

The need for controlling age as a variable with regard to the areas under investigation has been developed in both Chapters 1 and 2. The use of existing class structures made necessary by both motivating factors and the educational context provided the basis for using pretest scores to control for initial group inequalities in relevant areas. The positive relationship between pretest and posttest scores needs no explanation while the positive relationship between age and the dependent variables has been documented.

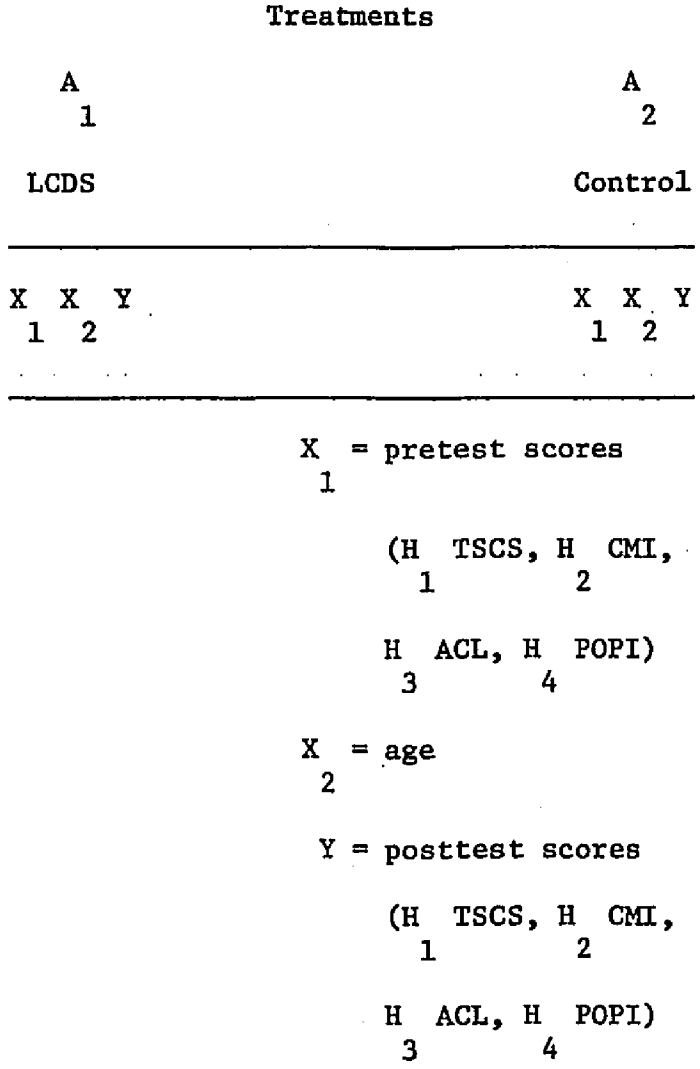

Figure 2. One-way classification analysis of covariance paradigm for Hypotheses 1, 2, 3 and 4.

Consequently, the rationale for using age and relevant pretest scores as covariates is established.

Dependent Variables

Hypothesis 1. The dependent variable indicators used to test Hypothesis 1 were the following four scales of the Tennessee Self-Concept Scale: Total Score, Identity or Self-Concept, Self-Satisfaction and Behavior.

Hypothesis 2. To test Hypothesis 2 the dependent variable measure was the Attitude Scale of the Career Maturity Inventory.

Hypothesis 3. The dependent variable indicators utilized to test the third hypothesis were the Self-Confidence, Personal Adjustment, Autonomy, and Change Scales of the Adjective Check List.

Hypothesis 4. Hypothesis 4 was tested by determining the degree of process orientation to planning that was present as determined by content analysis of self-descriptive essays written by participating subjects.

Instruments

The instruments which were used as criterion measures to test the four research hypotheses were selected on the basis of their appropriateness and relevance to the stated objectives of this investigation.

Tennessee Self-Concept Scale

Fitts (1965) developed this measure of self-concept in order to meet the need for an instrument which was simple for the subject, widely applicable, well standardized, and multidimensional.

The Scale is composed of 100 self-descriptive statements which the subject uses to indicate his phenomenological view of himself. The instrument is appropriate for individuals aged 12 and older who read minimally at a sixth-grade level. There are two scoring systems available which are referred to as a counseling form and a clinical form. Both of these forms are derived from the same self-administered test. Because of the scales with which this study deals, and because the clinical form is not considered appropriate for direct feedback to the subject, the counseling form is considered to be the best suited of the two versions in terms of this study. The counseling form gives 15 profiled scores, consisting of nine self-esteem scores, three variability of response scores, and self-criticism, distribution, and time scores. The following scales are considered to be significant in terms of this study. The descriptions are those of the test author (Fitts, 1965, pp. 2-3).

Total Score.

> This is the most important single score--[reflecting] the overall level of self-esteem. Persons with high scores tend to like themselves, feel that they are persons of value and worth, have confidence in themselves, and act accordingly. People with low scores are doubtful about their own worth; see themselves as undesirable; often feel anxious, depressed, and unhappy; and have little faith or confidence in themselves [Fitts, 1965, p. 2].

Identity or Self-Concept. "These are the 'what I am' items. Here, the individual is describing his basic identity--what he is as

he sees himself [Fitts, 1965, p. 2]."

Self-Satisfaction. "This score comes from those items where the individual describes how he feels about the self he perceives. In general, this score reflects the level of self-satisfaction or self-acceptance [Fitts, 1965, pp. 2-3]."

Behavior. "This score comes from those items that say 'this is what I do, or this is the way I act.' Thus, this score measures the individual's perception of his own behavior or the way he functions [Fitts, 1965, p. 3]."

While retest reliability varies for different scale scores, it is generally in the high 80s and deemed sufficient to warrant confidence in individual difference measurement (Buros, 1972, p. 366). For the four scales mentioned, Fitts (1965) reports reliability data based on test-retest with college students over a 2-week period as .92, .91, .88, .88, respectively. The validity of this instrument is indicated by the following: interjudge agreement in terms of item selection; discrimination between groups, correlation with other personality measures, and personality change under particular conditions where it might be expected. Thus, for numerous reasons, this instrument seemed particularly well-suited for this study. The TSCS is considered to rank among the better measures of its type, combining group discrimination with self-concept information (Buros, 1972, p. 369). Numerous studies have been conducted using this Scale and a wealth of data is available concerning its employment under various circumstances. Specifically, the TSCS has been used as an instrument to evaluate the effectiveness of varying types of group

counseling and instructional approaches (Axmaker, 1970; Cordell, 1973; Garrison, 1972; Gunter, 1975; Mackeen & Herman, 1974; Meyer, 1975; Wildblood, 1972). To test the first hypothesis, the four scales mentioned were evaluated on a pre- post-test basis in terms of the experimental and the control groups.

Career Maturity Inventory

The Attitude Scale of the Career Maturity Inventory was developed by Crites (1965) to provide an inventory of career choice attitudes which would be relevant for the purposes of counseling evaluation, instruction, and research. More specifically, Crites has stated that this Scale is intended: "to elicit the attitudinal or dispositional response tendencies, in [career] maturity which are nonintellective in nature, but which may mediate both choice behaviors and choice aptitudes [competencies] [p. 7]." The Scale is composed of 50 attitudinal statements in a true-false format which are derived from the following rationally deduced attitude clusters: involvement in the choice process; orientation toward work; independence in decision making; preference for career choice factors; and conceptions of the choice process. The Scale is appropriate at the upper limit for college seniors (Crites, 1973) and adults (Sheppard, 1971) who read minimally at a sixth-grade level. Crites (1974) reports that it is equally applicable to both males and females and all social strata. Although subscale scores based on each of the attitude clusters are being developed, at present the Scale yields only a global score of career attitude maturity.

Reliability for the Attitude Scale has been ascertained in terms of internal consistency and test-retest stability. With regard to the former, values averaged .74 with the highest reported as .84 and the lowest as .65. Crites (1974) states that these results are consistent with theoretical expectations for a factorially complex scale such as the CMI whose internal consistency should be expected to be less than a unidimensional scale. Test-retest reliability over a year's time is reported as .71. There is at present no available estimate concerning how much of this measured variance is due to maturational changes and how much is due to measurement error. The validity of the Attitude Scale has been determined with regard to: content validity by selection of appropriate test material by expert judges; criterion-related validity by correlations with relevant variables and other scales; and construct validity by correlation with intellective and nonintellective variables. The area this instrument purports to measure is particularly relevant in terms of this study. The Attitude Scale of the CMI is appropriate for program evaluation and individual assessment. Consequently, it is well-suited within the context of this investigation. This particular scale of the CMI has been used to evaluate numerous research studies under circumstances somewhat similar to this investigation. Specifically, the Attitude Scale has been used to determine the effects of various counseling and didactic methods (Asbury, 1967; Bovee, 1967; Feldman, 1973; Flake, Roach, & Stenning, 1975; Gilliland, 1966; Goodson, 1969; Jackson, 1971). To test the second hypothesis, the Attitude Scale of the CMI was evaluated on a pre- post-test basis in terms of the

experimental and the control groups.

Adjective Check List

The Adjective Check List (1965) is an instrument which involves a minimum of instruction to the testee, may be completed in 10 or 15 minutes, is superficially very simple, and does not produce resistance or anxiety. It provides for a wide range of behavior and is particularly useful as a flexible research instrument. This flexibility allows the instrument to be used not only in a self-descriptive manner, but also by an observer describing a subject as he perceives him. The instrument was put to this latter use in this study.

The ACL consists of 300 adjectives commonly used to describe attributes of a person and it provides a method of recording and tabulating these attributes (Gough & Heilbrun, 1965). The instrument can be scored for 24 variables including 15 needs derived from Murray's Need-Press System (Murray, 1938). Characteristics or traits are not assigned values, but are used solely in a descriptive sense. This makes the instrument well-suited to a study of this type. The following scales are considered to be significant in terms of this study. The descriptions are basically those of the test authors (Gough & Heilbrun, pp. 8-11).

Self-Confidence

> The high-scorer is [seen as] assertive, affiliative, outgoing, persistent, an actionist. . . . He makes a distinct impression on others, who [view] him as forceful, self-confident, determined, ambitious, and opportunistic. The low-scoring person is [seen

> as] a much less effective person in the everyday sense of the word--he [is viewed as having] difficulty in mobilizing himself and taking action [Gough & Heilbrun, 1965, p. 8].

Personal Adjustment. The high scorer is seen as having:

> a positive attitude toward life more than an absence of problems and worries. The attitudinal set is [viewed as] one of optimism, cheerfulness, interest in others, and a readiness to adapt. . . . The subject low on the personal adjustment scale [is seen as being] at odds with other people and as moody and dissatisfied [Gough & Heilbrun, 1965, p. 9].

Autonomy. The autonomous person is perceived as acting: "independently of others or of social values and expectations. . . . The high-scorer . . . is [viewed as] independent and autonomous, but also assertive and self-willed. . . . The low scorer is [seen as being] of a moderate and even subdued disposition [Gough & Heilbrun, 1965, p. 10].

Change. Persons who are scored high on change are seen as:

> typically perceptive, alert, and spontaneous individuals who comprehend problems and situations rapidly and incisively and who take pleasure in change and variety. . . . The low-scorer seeks stability and continuity in his environment and is apprehensive of ill-defined and risk-involving situations [Gough & Heilbrun, 1965, p. 11].

Test-retest reliability for utilized scales varies from the high 60s to the low 80s (Gough & Heilbrun, 1965, p. 14). Although these scales vary in stability, they are in general considered to be

reliable. Ratings by independent judges correlate in the 60s and 70s (Gough & Heilbrun). These coefficients result partially because conventional methods of calculating reliability cannot take into account stylistic variations which result in different descriptive elements being used to arrive at similar descriptive outcomes with a subsequent low reported reliability (Gough, 1960). Validity studies have shown the ACL to be correlated positively with the CPI (California Psychological Inventory) and the MMPI (Minnesota Multiphasic Personality Inventory). Validity is also indicated by the positive correlation of the ACL with other measures of self-acceptance. There is some overlap between scales although most scales seem to be adequately independent. In short, although the ACL has some limitations, it is considered to be an economical means of assessing general adjustment (Buros, 1972, p. 78). This economical aspect is particularly important in terms of time and observer sophistication when the instrument is being used by an unsupervised second party as it is in this study. This approach to assessment is described by Masterson (1975) as placing emphasis: "on obtaining a maximum amount of descriptive information with minimal emphasis on the mechanics of response [p. 276]."

The adjective check list technique has been used in a number of studies utilizing procedures similar to those used in this investigation (that is, requiring an observer to complete a check list in an evaluative manner in terms of another individual). Specifically, Masterson (1975) reports that adjective check lists have been used to record perceptions of: patients with regard to their therapists

(Reinehr, 1969); teachers with regard to their students (Kitchin, 1972); employees with regard to their managers (Barron & Egan, 1968); and parents with regard to their children (Brown, 1972; Scarr, 1966). There is evidence indicating that the ACL is equally reliable and valid when it is used to describe others as when it is used self-descriptively (Gough, 1960). Scarr (1966) found that: "the ACL scales correlated systematically with both direct and indirect measures of . . . behavior, lending confidence in the validity of the ACL scales [when used by an observer] [p. 122]." Scarr (1966) also states that: "the ratings from several ACL protocols on the same subject are at least roughly comparable, given a minimum common vocabulary among the raters [p. 128]." Hypothesis number 3 will be tested by evaluating the Self-Confidence, Personal Adjustment, Autonomy, and Change Scales of the ACL on a pre- post-test basis in terms of the experimental and the control groups.

Process Orientation to

Planning Indicator

This instrument was developed on a rational basis to give an indication of process orientation to planning as broadly defined in Chapter 1, and as specifically defined here in terms of criteria themes. These criteria were used as a basis for evaluation and scoring of themes (+ present or - absent) within item units or essays. This content analysis process was developed along the following lines as suggested by Berelson (Lindzey, 1954, p. 507). The universe of content is the subject's "perceived process orientation to planning" as elicited by instructions phrased as follows.

Super (1957) has stated: "men seek work and occupations in which they can be the kinds of persons they want to be [p. 294]." Discuss yourself in terms of an occupation and refer to factors that you think have an effect on your view. Specifically what steps do you consider essential in relating yourself to an occupation?

The subject's response was written and limited in terms of time (20 minutes) and paper (one 8-1/2 by 11 inch sheet of paper). Written essays were scored (+ present or - absent) in terms of theme referents based on the following:

Operational Bases for Evaluation	Corresponding Competency Components from Crites' Career Maturity Model (1974)
Referral to personal values	Self-knowledge
Consideration of options	Knowledge of jobs
Choosing a goal	Goal selection
Dealing with barriers	Planning
Working effectively	Problem solving

All plus scores for each of the five evaluated areas were then counted for each essay. The number of pluses constituted the score which ranged from a possible 0 to 5 for each subject. Thus this instrument was designed in such a manner as to provide an interval scale which would be sensitive to varying degrees of process orientation to planning. There were two psychologists adequately trained in the

scoring process who independently evaluated portions of both the pre- and post-test essays in accordance with the preceding criteria (see Appendix A).

Concerning the reliability of content analysis, Berelson (1952) states that: "data should be secured under similar conditions . . . [and] different coders should produce the same results when they apply the same set of categories to the same content [p. 172]." The first of these requirements was met as described earlier in this section. The second was checked by randomly assigning 25% of pretest essays and 25% of posttest essays to both analysts for independent evaluation. These independently derived scores were then correlated to determine interjudge reliability. The pretest correlation coefficient was .90, while the posttest correlation coefficient was .94 as determined by the Pearson product-moment technique. As these coefficients were considered to adequately demonstrate a sufficient degree of interjudge reliability, the remaining 75% of the pretest essays and 75% of the posttest essays were both equally divided between the two analysts for scoring. All essays were coded as experimental or control and thoroughly mixed before being distributed to the analysts in order to avoid any possible halo effect due to biasing knowledge. The mean values of the correlated scores were utilized in the final analysis of data.

With regard to the validity of subject matter analyses, Berelson (1952) states that: "in cases in which there is high agreement on the definitions of the relevant categories, there is little difficulty in achieving validity in content analysis data [p. 169]."

He continues: "Validity does not seem to be a major problem in content analysis. . . . [As] careful definition of categories and judicious and alternative selection of indicators will [usually] take care of the matter [p. 171]."

> Content analysis assumes that inferences about the relationship between . . . content and effect can validly be made, or the actual relationships established. . . . This assumption that knowledge of the content can legitimately support inferences about non-content events is basic [to the process] [p. 18].

Kaplan and Goldsen (in Berelson, 1952) have noted that: "the content analyst aims at a quantitative classification of a given body of content, in terms of a system of categories devised to yield data relevant to specific hypotheses concerning that content [p. 15]." Berelson (1952) defines content analysis as a: "research technique for the objective, systematic, and quantitative description of the manifest content of communication [p. 18]." In order to operationalize these statements certain requirements must be met (Berelson, pp. 16-17). Content analysis must be limited to the actual content or "what-is-said" rather than the motives or the "why" of the content. Objectivity requires that categories be defined in such a manner that different analysts can obtain the same results. Content analysis must also be systematic. This means that within a specific content area, all occurences must be considered and that obtained data must be relevant in terms of a hypothesis. Finally, content analysis must be quantitative. A form of quantification is "qualitative" analysis which is based upon the presence or absence

of some specified content. "Qualitative" analysis is most frequently used when samples are too small to justify precise counting. This type of procedure involves less formalized categories than more elaborate forms of quantitative analysis (Berelson, pp. 119-125). Because these requirements were readily met in this study and because of the appropriateness of this method of analysis within the educational context of this investigation, content analysis was considered to be particularly relevant. Kerlinger (1973, p. 533) has stated that educational experiments can profitably use content analysis to assess the effects of experimental treatments on dependent variables. Accordingly, to test the fourth hypothesis, this process was used to evaluate the experimental and control groups on a pre- post-test basis.

Procedures

The 32 TNCC students who were initially enrolled in General 108--Career Education during the Winter Quarter of 1976 were designated as the experimental group. The control group was initially composed of the 35 volunteers from Psychology 202--General Psychology who participated in an out-of-class capacity. Grades for the students taking General 108, a 3-credit-hour course, were determined by contracts in which each student indicated his or her willingness to do a certain amount of work for a specific grade (see Appendix B). Grades were in no way related to a student's performance on the evaluative instruments and the students were made aware that participation and not performance was a course requirement. Grades for the students taking Psychology 202 were only minimally involved in that

volunteers received extra project credit from their instructor for their participation. Again, this credit was contingent only upon their participation and not their performance. Both groups were informed that they were part of an experiment.

The four pretest measures were administered to both the experimental and control groups during the period January 14 to January 23. This involved in-class administration of the TSCS, the Attitude Scale of the CMI, and the Process Orientation to Planning Indicator (POPI) in one time block (1-1/2 hours) and sending out and receiving the completed ACL. The standard administrative instructions were given for the TSCS and the CMI. The instructions given for the POPI were as elaborated in the section dealing with that instrument. For the ACL there was a separate instruction sheet which accompanied the instrument when it was delivered to the observer who was to complete it (see Appendix C). During the 11-week intervention period, the experimental group was exposed 3 hours per week to Modules One through Six of the LCDS which involved group interaction dealing with: a greater understanding of self, relating values to career planning, goal setting skills, increasing awareness of life style options, barriers and coping behavior, and productively utilizing information. During this same period the control group received no treatment. The four posttest measures were administered to both the experimental and control groups during the period March 9 to March 18. Again this involved an in-class block administration of the TSCS, the CMI Attitude Scale, and the POPI, and sending out and collecting the completed ACL. Administrative instructions were identical to those

given for the pretest measures with the exception of the instruction sheet which was addressed to the observers who received the ACL (see Appendix D).

At the end of the quarter when all pre- and post-test data were assembled, scores were available on all four instruments for 30 experimental subjects. Complete sets of scores were not available for two students in the experimental group who had withdrawn from the course. Of the 30 who completed the course, one student was eliminated as during the posttest period he developed serious medical problems and was in the process of undergoing diagnostic medical evaluation. By several indications, these events had a negative effect on this individual which were not related to the course.

Li (1964) states that: "the use of equal sample sizes has several advantages over the use of unequal sample sizes [p. 197]." These advantages include: ease of computation, minimization of the effect of heterogeneity of population variances, and minimization of the probability of committing a type II error for a given total number of observations. Consequently, three students were randomly eliminated from the 32 control subjects who were still available at the end of the quarter (three students of the original 35 were lost due to withdrawals and sickness). This resulted in a final total N of 58 with 29 students in the experimental and control groups, respectively.

All 15 profiled scores of the TSCS and all 24 scales scores of the ACL were determined by the computer scoring services of Counselor Recordings and Tests and National Computer Systems, respectively. The Attitude Scale of the CMI was scored by hand as

was the POPI. The scoring procedure employed with the former was the standard method as described in the manual while the method employed with the latter has been described in detail in the section dealing with instruments. Both raw scores (CMI and POPI) and standard scores (TSCS and ACL) were statistically manipulated. For each hypothesis the appropriate data were key punched on International Business Machines (IBM) cards and processed by the College of William and Mary Computer Center on an IBM 370/145 digital computer.

Statistical Methods

The statistical methods utilized in the treatment of the data were selected to:

1. Determine if significant differences existed between the experimental group and the control group after intervention which were indicative of self-concept enhancement in the experimental group as ascertained by four selected scales of the TSCS.

2. Determine if a significant difference existed between the experimental group and the control group after intervention which indicated an increase in the vocational maturity of the experimental group as measured by the Attitude Scale of the CMI.

3. Determine if significant differences existed between the experimental group and the control group after intervention indicative of increased independent/responsible behavior by members of the experimental group as determined by significant others utilizing select scales of the ACL.

4. Determine if a significant difference existed between the experimental group and the control group after intervention which

indicated an increase in the process orientation to planning of the experimental group as ascertained by content analysis.

One-way classification analysis of covariance was used to test all four hypotheses. In terms of computer programming this involved a Multiple Analysis of Variance Program (MANOVA). Dawson (1975) states that: "MANOVA can handle multiple criterion variables while performing either an analysis of variance or covariance [p. 1]." The two control variables which served as covariates in all analyses of covariance were age and appropriate pretest scores. Each subject's age was determined from recorded information on the CMI answer sheet. All hypotheses were tested using a .05 level of significance.

Chapter 4

Results

The purpose of this investigation was to determine the effects of the Life Career Development System on selected aspects of the self-concept and career maturity of community college students. Specifically, this study was addressed to the following four major questions:

1. Are there any significant differences in self-concept between participating groups which are attributable to LCDS counseling as determined by the Total Score, Identity, Self-Satisfaction and Behavior Scales of the TSCS?

2. Is there a significant difference in vocational maturity between participating groups which is attributable to LCDS counseling as determined by the Attitude Scale of the CMI?

3. Are there any significant behavioral differences between participating groups which are attributable to LCDS counseling as determined by the Self-Confidence, Personal Adjustment, Autonomy and Change Scales of the ACL?

4. Is there a significant difference in process orientation to planning between participating groups which is attributable to LCDS counseling as determined by content analysis of self-descriptive essays?

Questions 1 and 3, both of which deal with self-concept in this study, can each be considered in four subparts based on the scales involved. The four major hypotheses that are related to the

preceding four questions were all investigated within a Compromise Experimental Group--Control Group design (Kerlinger, 1973) which utilized pretests and posttests. The data to test each of the four hypotheses were subjected to a one-way classification analysis of covariance. Kerlinger has defined analysis of covariance as:

> a form of analysis of variance that tests the significance of the differences between means of final experimental data by taking into account the correlation between the dependent variable and one or more covariates, and by adjusting initial mean differences in the experimental groups. That is, the analysis of covariance analyzes the differences between experimental groups on Y after taking into account initial differences in the Y measures (i.e., pretest measures) or differences in some pertinent independent variable. The measure used for the control (pretest measures or measures on a pertinent variable) is called the covariate [p. 370].

The statistical results of this investigation are presented by hypothesis.

Hypothesis 1

Hypothesis 1 states that there will be a significant difference in the group participating in LCDS training and the group not participating in terms of self-concept as determined by the following four scales of the Tennessee Self-Concept Scale: (a) Total Score, (b) Identity or Self-Concept, (c) Self-Satisfaction, and (d) Behavior. To test each of these four subhypotheses of hypothesis 1, posttest data from each of the four scales were separately subjected to a

one-way classification analysis of covariance which adjusted for initial discrepancies between the experimental and control groups in terms of age and relevant pretest scale scores. After these covariant adjustments had been carried out with regard to each scale these four analyses produced the following F ratios: (a) Total Score F = 0.125, (b) Identity or Self-Concept F = 0.007, (c) Self-Satisfaction F = 0.394, and (d) Behavior F = 0.006. These four F values are not significant at the .05 level. Tables 1, 2, 3 and 4 present the means and standard deviations of the variables under consideration in terms of control and experimental groups for the Total Score, Identity or Self-Concept, Self-Satisfaction and Behavior scales, respectively. Tables 5, 6, 7 and 8, respectively, present information relevant to each analysis of covariance utilized in testing the Total Score, Identity or Self-Concept, Self-Satisfaction and Behavior subhypotheses. The TSCS standard scores utilized in each of these analyses are reported in Appendixes E, F, G and H. Ages are reported in Appendix I.

For all four subhypotheses of hypothesis 1 the null was accepted. The research hypothesis that there would be a significant difference in the experimental LCDS group and the control group in terms of self-concept as determined by the Total Score, Identity or Self-Concept, Self-Satisfaction and Behavior scales of the TSCS was rejected. There were no statistically significant differences between the two groups in terms of these four scales at the .05 level of significance.

Hypothesis 2

Hypothesis 2 states that there will be a significant

Table 1

Hypothesis 1--Total Score, Summary

Data of the Variables

	Age	Total score	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	46.655	48.207
Standard deviation	5.864	9.340	10.280
Experimental group (n = 29)			
Mean	25.241	45.276	46.448
Standard deviation	8.007	9.823	10.332

Table 2

Hypothesis 1--Identity or Self-Concept,

Summary Data of the Variables

	Age	Identity	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	47.276	48.345
Standard deviation	5.864	10.730	11.953
Experimental group (n = 29)			
Mean	25.241	45.345	46.586
Standard deviation	8.007	9.770	9.314

Table 3

Hypothesis 1--Self-Satisfaction, Summary Data of the Variables

	Age	Self-satisfaction	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	48.586	50.310
Standard deviation	5.864	9.368	10.050
Experimental group (n = 29)			
Mean	25.241	48.621	49.379
Standard deviation	8.007	10.725	11.159

Table 4

Hypothesis 1--Behavior, Summary

Data of the Variables

	Age	Behavior	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	44.103	45.172
Standard deviation	5.864	9.182	10.156
Experimental group (n = 29)			
Mean	25.241	42.103	43.345
Standard deviation	8.007	9.267	9.868

Table 5

Hypothesis 1--Total Score, Analysis of Covariance of Control and Experimental Group Scores on the Total Score Scale of the Tennessee Self-Concept Scale

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	3.113	1	3.113	0.125
Within	1,346.824	54	24.941	
Total	1,349.937	55		

Table 6

Hypothesis 1--Identity or Self-Concept, Analysis of Covariance of Control and Experimental Group Scores on the Identity or Self-Concept Scale of the Tennessee Self-Concept Scale

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	0.168	1	0.168	0.007
Within	1,362.344	54	25.229	
Total	1,362.512	55		

Table 6

Hypothesis 1--Identity or Self-Concept, Analysis of Covariance of Control and Experimental Group Scores on the Identity or Self-Concept Scale of the Tennessee Self-Concept Scale

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	0.168	1	0.168	0.007
Within	1,362.344	54	25.229	
Total	1,362.512	55		

Table 7

Hypothesis 1--Self-Satisfaction, Analysis of Covariance of Control and Experimental Group Scores on the Self-Satisfaction Scale of the Tennessee Self-Concept Scale

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	13.938	1	13.938	0.394
Within	1,910.426	54	35.378	
Total	1,924.364	55		

Table 8

Hypothesis 1--Behavior, Analysis of Covariance of Control and Experimental Group Scores on the Behavior Scale of the Tennessee Self-Concept Scale

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	0.203	1	0.203	0.006
Within	1,858.842	54	34.423	
Total	1,859.045	55		

difference in the group participating in LCDS training and the group not participating in terms of vocational maturity as determined by the Attitude Scale of the Career Maturity Inventory. To test this hypothesis, posttest data were subjected to a one-way classification analysis of covariance which adjusted for initial differences between groups in terms of age and pretest scores. The analysis, following adjustment, produced an F ratio of 0.310. This F value is not statistically significant at the .05 level. Table 9 presents the means and standard deviations of the variables under consideration for the control and the experimental groups. Table 10 presents information pertinent to the analysis of covariance utilized in testing this hypothesis. The CMI raw scores utilized in this analysis are reported in Appendix J. Ages are reported in Appendix I.

For hypothesis 2 the null was accepted. The research hypothesis that there would be a significant difference in the experimental LCDS group and the control group in terms of vocational maturity as determined by the Attitude Scale of the CMI was rejected. There was no statistically significant difference between the two groups in terms of relevant CMI scores at the .05 level of significance.

Hypothesis 3

Hypothesis 3 states that there will be a significant difference in the group participating in LCDS training and the group not participating in terms of independent/responsible behavior as determined by a significant other utilizing the following scales of the Adjective Check List: (a) Self-Confidence, (b) Personal Adjustment, (c) Autonomy,

Table 9

Hypothesis 2--Career Maturity Inventory,

Summary Data of the Variables

	Age	Career maturity inventory	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	39.690	39.793
Standard deviation	5.864	4.591	4.378
Experimental group (n = 29)			
Mean	25.241	37.793	37.828
Standard deviation	8.007	4.952	5.977

Table 10

Hypothesis 2--Analysis of Covariance of Control and Experimental Group Scores on the Attitude Scale of the Career Maturity Inventory

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	5.047	1	5.047	0.310
Within	878.244	54	16.264	
Total	883.291	55		

and (d) Change. To test each of these four subhypotheses of hypothesis 3, posttest data from each of the four scales were separately subjected to a one-way classification analysis of covariance which adjusted for initial differences between the experimental and control groups in terms of age and appropriate pretest scale scores. After these covariant adjustments had been made in terms of each scale, these four analyses produced the following F ratios: (a) Self-Confidence $F = 0.502$, (b) Personal Adjustment $F = 0.013$, (c) Autonomy $F = 0.001$, and (d) Change $F = 1.514$. These four F values are not significant at the .05 level. Tables 11, 12, 13 and 14 present the means and standard deviations of the variables under consideration in terms of control and experimental groups for the Self-Confidence, Personal Adjustment, Autonomy and Change scales, respectively. Tables 15, 16, 17 and 18, respectively, present information pertaining to each analysis of covariance used in testing the Self-Confidence, Personal Adjustment, Autonomy and Change subhypotheses. The ACL standard scores utilized in each of these analyses are available in Appendixes K, L, M and N. Ages are reported in Appendix I.

For all four subhypotheses of hypothesis 3, the null was accepted. The research hypothesis that there would be a significant difference in the experimental LCDS group and the control group in terms of independent/responsible behavior as determined by a significant other utilizing the Self-Confidence, Personal Adjustment, Autonomy and Change scales of the Adjective Check List was rejected. There were no statistically significant differences between the two

Table 11

Hypothesis 3--Self-Confidence, Summary Data of the Variables

	Age	Self-confidence	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	54.345	53.483
Standard deviation	5.864	8.587	8.887
Experimental group (n = 29)			
Mean	25.241	47.448	49.897
Standard deviation	8.007	10.476	9.413

Table 12

Hypothesis 3--Personal Adjustment,

Summary Data of the Variables

	Age	Personal adjustment	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	46.448	46.966
Standard deviation	5.864	9.006	12.167
Experimental group (n = 29)			
Mean	25.241	50.034	49.793
Standard deviation	8.007	9.171	9.678

Table 13

Hypothesis 3--Autonomy, Summary

Data of the Variables

	Age	Autonomy	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	53.966	53.655
Standard deviation	5.864	9.901	11.273
Experimental group (n = 29)			
Mean	25.241	46.724	47.862
Standard deviation	8.007	11.436	11.578

Table 14

Hypothesis 3--Change, Summary

Data of the Variables

	Age	Change	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	47.966	48.103
Standard deviation	5.864	7.595	7.566
Experimental group (n = 29)			
Mean	25.241	45.759	48.759
Standard deviation	8.007	11.828	9.941

Table 15

Hypothesis 3--Self-Confidence, Analysis of Covariance of Control and Experimental Group Scores on the Self-Confidence Scale of the Adjective Check List

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	19.772	1	19.772	0.502
Within	2,126.394	54	39.378	
Total	2,146.166	55		

Table 16

Hypothesis 3--Personal Adjustment, Analysis of Covariance of Control and Experimental Group Scores on the Personal Adjustment Scale of the Adjective Check List

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	0.803	1	0.803	0.013
Within	3,402.420	54	63.008	
Total	3,403.223	55		

Table 17

Hypothesis 3--Autonomy, Analysis of Covariance of Control and Experimental Group Scores on the Autonomy Scale of the Adjective Check List

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	0.057	1	0.057	0.001
Within	3,374.635	54	62.493	
Total	3,374.692	55		

Table 18

Hypothesis 3--Change, Analysis of Covariance of Control and Experimental Group Scores on the Change Scale of the Adjective Check List

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	56.776	1	56.776	1.514
Within	2,025.692	54	37.513	
Total	2,082.468	55		

groups in terms of these four scales at the .05 level of significance.

Hypothesis 4

Hypothesis 4 states that there will be a significant difference in the group participating in LCDS training and the group not participating in terms of a process orientation to planning as determined by content analysis. To test this hypothesis posttest data were subjected to a one-way classification analysis of covariance which adjusted for initial differences between the experimental and control groups in terms of age and pretest content analysis scores. Following this adjustment, the analysis produced an F ratio of 6.301. This F value is statistically significant at the .05 level. Table 19 presents the means and standard deviations of the variables under consideration for the control and the experimental groups. Table 20 presents information pertaining to the analysis of covariance used in testing this hypothesis. The POPI raw scores utilized in this analysis are reported in Appendix O. Ages are reported in Appendix I.

Examination of the means indicates a significant trend in directions which were not hypothesized. Students in the control group showed a tendency to score higher on the posttest content analysis than they had on an identical pretest measure. Students in the experimental group, on the other hand, showed a slight decline in posttest content analysis scores in comparison to their own pretest scores. Because of these unanticipated results the strength of the effect of the independent variable on the dependent variable was examined in terms of the eta ratio.

[Eta provides] an indication of how dissimilar the means on

Table 19

Hypothesis 4--Process Orientation to Planning Indicator, Summary Data of the Variables

	Age	Process orientation to planning indicator	
		Pretest	Posttest
Control group (n = 29)			
Mean	24.897	1.931	2.397
Standard deviation	5.864	0.651	0.839
Experimental group (n = 29)			
Mean	25.241	1.914	1.879
Standard deviation	8.007	0.708	0.728

Table 20

Hypothesis 4--Analysis of Covariance of Control and Experimental Group Scores on the Process Orientation to Planning Indicator

Source of variation	Sum of squares	Degree of freedom	Mean square	F
Between	3.807	1	3.807	6.301
Within	32.630	54	0.604	
Total	36.437	55		

> the dependent variable are within the categories of the independent variable. . . . When eta is squared [it may be interpreted as] the proportion of variance in the dependent variable explained (or accounted for) by the independent variable [Nie, Hull, Jenkins, Steinbrenner, & Bent, 1975, p. 230].

Eta squared will equal zero when the means within the categories of the independent variable are identical (Nie et al., p. 401). It will increase toward a maximum value of one as the strength of the mean difference increases provided variances within independent variable categories are minimal (Nie et al., p. 230). In examining the data relating to hypothesis 4 in terms of eta, it was found that eta squared equaled .1024 (0.32^2). This indicates that the LCDS treatment factor accounts for only 10.24% of the variation in the dependent variable under consideration. Consequently, although a significant difference exists between the experimental and the control groups in directions which were not hypothesized, that dissimilarity is relatively weak. The weakness of this association must be considered in interpreting these results. For hypothesis 4 the null was rejected. The research hypothesis that there would be a significant difference in the experimental LCDS and the control group in terms of a process orientation to planning as determined by content analysis was accepted. There was a statistically significant difference between the two groups in terms of POPI scores at the .05 level of significance. However, this difference was not in the positive direction expected for the LCDS group.

Summary

The results presented in this chapter may be summarized as follows:

1. There were no significant F ratios discovered in the four analyses of covariance concerned with self-concept.

2. There was no significant F ratio found in the analysis of covariance concerned with vocational maturity.

3. There were no significant F ratios found in the four analyses of covariance concerned with independent/responsible behavior as determined by significant others.

4. There was a significant F ratio discovered in the analysis of covariance concerned with a process orientation to planning. The dissimilarity between the groups was relatively weak and not in the direction expected.

Chapter 5

Summary, Conclusions, Implications and Recommendations

Chapter 5 provides an examination of the results of this evaluation by summarizing the study, presenting the conclusions and discussing certain implications and recommendations which seem pertinent.

Summary

The need for a structured approach to life career development which aids community college students in meeting their needs by increasing their self-esteem and their level of vocational maturity has been well documented. The principle that career development should involve the total individual by sequentially integrating his or her goals, values, plans and decisions, in such a manner that personal empowerment is enhanced provides a relevant framework which has readily gained broad acceptance in various educational contexts. The Life Career Development System potentially offers a modular approach which can be flexibly adapted to a particular educational environment in a way which facilitates the development of personal empowerment as broadly defined. Tentative reports concerning the effectiveness of this program have been based primarily on subjective nonstandardized evaluative measures. Very little empirical data has been available concerning the effectiveness of the LCDS in a general sense. Even fewer reports of any kind have dealt with the

effectiveness of the system at the community college level.

The purpose of this study has been to attempt to provide a comprehensive systematic evaluation of this strategy at a given educational level. More specifically, this study has attempted to determine what effect a structured life career development system has on community college students in terms of self-concept, vocational maturity, independent/responsible behavior, and process orientation to planning as determined by external criteria.

To answer these questions, this investigation utilized a Compromise Experimental Group--Control Group design made necessary by the educational environment and certain ethical considerations. This design reflects the preclusion of experimental random assignment. The subjects for this study were 29 students desirous of exploring vocational options in a group counseling context and 29 students enrolled in an elementary course in general psychology. The former were designated as the experimental group while the control group was comprised of the latter. All students were drawn from Thomas Nelson Community College in Hampton, Virginia, during the winter quarter of 1976. This pretest posttest design involved treatment and no treatment for the experimental and the control groups, respectively. Treatment, the active variable, consisted of the following LCDS modules: Exploring Self, Determining Values, Setting Goals, Expanding Options, Overcoming Barriers and Using Information. These modules were explored by the experimental group for 3 hours each week during an 11-week period. The control group received no treatment during this same period. Grades were in no way related to any student's

performance on the pre- and post-test evaluative instruments and both groups were made aware that participation and not performance was the only requirement.

Statistical tests of significance concerning all research hypotheses and the related null hypotheses involved one-way classification analysis of covariance. The effects of the LCDS, the independent variable, were determined by comparing the experimental and control groups. In all cases age and appropriate pretest scores were used as covariants in order to control for initial inequalities in these areas. All hypotheses were tested using a .05 level of significance.

Conclusions

The conclusions concerning the effectiveness of the LCDS with this student population in terms of self-concept, vocational maturity, independent/responsible behavior and process orientation to planning as defined in this study will be presented by hypotheses.

Hypothesis 1

The research hypothesis that there would be a significant difference in the group participating in LCDS training and the group not participating in terms of self-concept as determined by the Total Score, Identity or Self-Concept, Self-Satisfaction and Behavior scales of the Tennessee Self-Concept Scale was rejected. For all four subhypotheses of hypothesis 1, the null was accepted. There were no statistically significant differences between the two groups in terms of these four scales at the .05 level of significance. It was concluded that there were no differences between the treatment and

the control group under the conditions of this experiment in terms of the stated dependent variables.

Hypothesis 2

The research hypothesis that there would be a significant difference in the group participating in LCDS training and the group not participating in terms of vocational maturity as determined by the Attitude Scale of the Career Maturity Inventory was rejected. For hypothesis 2, the null was accepted. There was no statistically significant difference between the two groups in terms of relevant CMI scores at the .05 level of significance. It was concluded that there was no difference between the treatment and the control groups under the conditions of this experiment in terms of the stated dependent variable.

Hypothesis 3

The research hypothesis that there would be a significant difference in the group participating in LCDS training and the group not participating in terms of independent/responsible behavior as determined by a significant other utilizing the Self-Confidence, Personal Adjustment, Autonomy, and Change scales of the Adjective Check List was rejected. For all four subhypotheses of hypothesis 3, the null was accepted. There were no statistically significant differences between the two groups in terms of these four scales at the .05 level of significance. It was concluded that there were no differences between the treatment and the control group under the conditions of this experiment in terms of the stated dependent variables.

Hypothesis 4

The research hypothesis that there would be a significant difference in the group participating in LCDS training and the group not participating in terms of a process orientation to planning as determined by content analysis was accepted. For hypothesis 4, the null was rejected. There was a statistically significant difference between the two groups in terms of POPI scores at the .05 level of significance. This difference, however, was not in the positive direction expected for the LCDS experimental group. On the contrary, students in the control group showed a tendency to score higher on the posttest content analysis than they had on an identical pretest measure. In contrast, students in the experimental group showed a slight decline in posttest content analysis scores in comparison to their own pretest scores. An examination of the strength of the effect of the independent variable on the dependent variable revealed that although a significant difference existed between the experimental and the control groups in directions which were not hypothesized, that dissimilarity was relatively weak. Apparently, the weak but significant difference between groups was brought about primarily by the increase in the posttest scores of the control group rather than the decline in the posttest scores of the experimental group. This would argue against the LCDS having a detrimental effect on the experimental group in terms of this outcome criterion. Instead, these results would seem to point toward some other variable which had an effect that was primarily apparent in the control group. In retrospect, this variable seems likely to be motivation. This would readily explain

the trends displayed by both the experimental and control groups.

The particular instrument utilized to test this hypothesis required that each participant be motivated to produce a self-descriptive essay in response to a certain general stimulus statement. A difference in motivation between the two groups could account for different levels of growth as well as different levels of performance on this instrument. One or both of these differences could readily provide an explanation for the discrepancy between groups. Piaget (in Battro, 1973) has stated: "motivation does not play an independent role in respect to cognitive schematism, but the two factors are always inseparable [p. 114]." Interpreting Piaget's theoretical perspective in the same subject area, Furth (1969) has written:

> To know is therefore an activity of the subject and knowledge is a construction in the true sense of the term. Yet this should not be understood as implying that any specific behavior, human or animal taken in its concrete situation is nothing but knowing behavior. Knowing activity is only a partial aspect of the whole, i.e., the organism's concrete behavior, and there are other aspects which always form part of that whole, as, for instance, motivational aspects [p. 15].

There are two considerations which must be borne in mind. Grades were not a motivating force for either group and need not be considered. Second, because of the nature of the educational setting, the research design utilized had certain inherent weaknesses, the most serious of which was an inability to use randomization and thus completely control for all possible extraneous variables. These limitations in this

particular research application mitigated against controlling for inequalities other than those controlled for by utilizing analysis of covariance in terms of age and relevant pretest scores. Thus, the two groups were different to an unknown extent. Consequently, it is certainly conceivable that there was a difference between the two groups with regard to motivation. This difference seemed subjectively apparent to the examiner when the posttest measures were administered as well as on other occasions. It is felt that if motivation had been controlled for, this weak but significant difference between experimental and control groups would have disappeared in terms of this dependent variable. In conclusion, there seems to be considerable justification to assume that there were no meaningful differences of primary concern in the context of this experiment between groups in terms of this dependent variable.

Limitations

This investigation was carried out in an educational setting where certain limitations were unavoidable. The two most notable are discussed here briefly.

1. Due to practical and ethical considerations as well as administrative policy, it was necessary to utilize intact classes in establishing control and experimental groups. Therefore, a combination of reasons prevented random assignment of participants to groups and random assignment of treatment to groups. Consequently, the experimental and the control groups were only equated statistically in terms of pretest scores and age through the use of analysis of covariance.

2. This investigation was solely concerned with a specific application of the LCDS in terms of a certain student population. Therefore, these results are not generalizable to all LCDS applications or to all populations. Thus, in the broader sense, this study serves only as a limited indicator of LCDS effectiveness and a basis for more extensive research.

Implications

In examining the nonstandardized pre-post evaluative instruments administered to the experimental group as part of the LCDS experience, it is interesting to note that in group terms this instrument indicated some measure of improvement. However, it should be considered that the LCDS approach teaches directly to the questions which comprise this instrument. The scores of the experimental group on this instrument are consistent with the results of both individual written evaluations of the course and a lengthy group discussion concerning the merits of the experience and the advisability of certain modifications. Both of these forms of feedback indicated in general that the participants viewed the course favorably, considered it helpful and were opposed to any major restructuring. Considerable pains were taken to elicit critical views. Consequently, it is felt that these general comments to some extent accurately reflect the perspectives of the participants. Thus, this course experience seems to have been perceived positively by the participants while having no effect in terms of self-concept and vocational maturity as defined in this study.

These indications that this experience was favorable are in

keeping with the earlier positive evaluations of Snead, Diment, Hummel, Marshall, and Thorpe (1974); Seward and Wilkinson (1975); Rodebaugh (1975); and Jennings and Walters (1975) which are discussed in Chapter 2. The danger in placing too great an emphasis on the type of positive evaluation described is expressed in part by Jennings and Walters when they warn that the nonstandardized LCDS pre- and post-evaluative measures may be too subjective to be valid instruments in assessing the effects of the LCDS. It is also expressed in part by LeMay (1967) when he cautions that frequently, group researchers have reported feelings and not evidence. However, taking both positive and noneffective considerations into account at face value, the worth of the LCDS ultimately becomes a question involving a value judgment. If the positive aspects of this approach are considered to be sufficient justification, then the LCDS may be viewed as providing a valuable experience for participants. If on the other hand improvement in terms of self-concept and vocational maturity, as defined, are considered to be of paramount importance, then there may be insufficient justification to continue offering the LCDS in this context. It would seem prudent to await the accumulation of more research before making a final decision.

Recommendations

With the preceding in mind, several recommendations are made for further research which are concerned with design considerations and increasing generalizability.

1. It would be useful if a similar study could be carried out in a setting where a randomized experimental design could be used.

This would be ethically feasible if the LCDS were being compared to another counseling approach thought to be effective.

2. It would be informative to conduct a follow-up study after a considerable period of time to determine if differences between groups developed or were maintained which might be attributable to the treatment variable.

3. It would be interesting to expand the LCDS offering to a two-quarter experience where the system could be evaluated in its entirety rather than in the adapted form which was evaluated in this study.

4. It would be useful to replicate this study at other community colleges where the LCDS is being similarly utilized.

In conclusion, it is suggested that those responsible for community college program development look critically at the objectives held for a program such as the one described in this study and then tentatively determine if the LCDS provides a productive means toward desired ends.

Appendix

Appendix A

Academic and Professional Qualifications of Content Analysts

1. Maxwell G. Bilsky

   Ph.D. University of Michigan

   Professor of Psychology, Madison College

   Harrisonburg, Virginia

2. Jacqueline D. Driver

   Ed.D. University of Maryland

   Assistant Professor of Psychology, Madison College

   Harrisonburg, Virginia

GRADE CONTRACT
General 108
Life/Career Development

The grades in this three credit course are based on the following standards:

A = 1. Extra credit work done on an individual basis on at least three exercises from three of the Modules covered.
2. Three independent journal activities done outside of class for each module.
3. Activities recorded in journal demonstrate excellent work.
4. Regular attendance (no unexcused absences).
5. Full participation in class sessions including pre- and post-evaluation measures.

B = 1. Two independent journal activities done outside of class for each module.
2. Activities recorded in journal demonstrate good work.
3. Regular attendance (no unexcused absences).
4. Full participation in class sessions including pre- and post-evaluation measures.

C = 1. One independent journal activity done outside of class for each module.
2. Activities recorded in journal demonstrate average work.
3. No more than two unexcused absences.
4. Full participation in class sessions including pre- and post-evaluation measures.

D = 1. At least one independent journal activity done outside of class for at least five out of the six modules.
2. Activities recorded in journal demonstrate conscientious effort.
3. No more than four unexcused absences.
4. Full participation in class sessions including pre- and post-evaluation measures.

F = 1. Falling below one or more of the standards for a "D."

As a student in General 108 I contracted with the facilitators and Thomas Nelson Community College to seek the grade of _____, by fulfilling the appropriate standards, as listed above, within the time period of this quarter. It is my understanding that, should circumstances require, the contract may be renegotiated and I may seek another grade by fulfilling the appropriate standards.

SIGNATURES:

Student: _____

Facilitators: _____

_____

Date: _____

Appendix C

Pretest Letter

Thomas Nelson Community College
P. O. Box 9407 • Hampton, Virginia 23670
Phone (804) 826-4800

Dear Parent, Spouse or Close Acquaintance:

The bearer of this message is currently involved in a course at TNCC which may or may not have some effect on the manner in which he deals with everyday situations. You are in a position to observe to some extent this person's behavior. It is for this reason that you are being asked to evaluate this individual by completing the enclosed instrument. This will be necessary at the present time and again in several months when you will again be contacted.

The enclosed check list is basically self-explanatory. Simply mark those adjectives which you feel are most descriptive of the person bearing this message at the present time. There are no good or bad or right or wrong answers. We are simply trying to determine if any change takes place.

Your cooperation is crucial in order for us to determine the effectiveness of this course. You are urged to take the ten minutes necessary to complete the enclosed instrument. Once completed, please place it in the enclosed envelope, seal it and return it to TNCC by way of the bearer.

Thank you for your cooperation. We will be contacting you again in several months.

Appendix D

Posttest Letter

Thomas Nelson Community College
P. O. Box 9407 • Hampton, Virginia 23670
Phone (804) 826-4800

Dear Parent, Spouse or Close Acquaintance:

Thank you for cooperating earlier by completing the check list that you received. In order for your first evaluation to be of value, it is necessary for you to again complete the same instrument which is enclosed.

As before, the check list is basically self-explanatory. Simply mark those adjectives which you feel are most descriptive of the person bearing this message at the present time. There are no good or bad or right or wrong answers. We are simply trying to determine your perception of this person. This final evaluation is important.

Please take the few minutes necessary to complete this checklist, place it in the envelope provided and return it as promptly as possible to TNCC by way of the bearer.

Thank you for your further anticipated cooperation.

Appendix E

Tennessee Self-Concept Scale

Standard Scores

Hypothesis 1--Total Score

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
49	51	53	50
49	47	44	61
46	49	40	53
29	31	47	50
36	36	56	64
46	42	55	62
42	48	43	40
51	54	36	39
33	37	55	66
49	52	50	46
55	56	54	52
63	69	46	39
24	26	46	51
42	46	51	56
50	48	50	46
32	39	52	49
51	52	24	27
39	39	44	45

39	47	36	36
34	31	43	46
53	50	46	54
69	74	43	42
54	53	49	46
49	45	62	53
52	55	50	51
43	43	53	51
49	42	18	18
45	48	52	52
40	37	55	53

Appendix F

Tennessee Self-Concept Scale

Standard Scores

Hypothesis 1--Identity or Self-Concept

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
46	54	49	48
48	42	55	58
50	52	42	57
32	32	53	50
36	44	56	56
42	44	59	66
37	43	40	37
54	53	36	32
27	37	57	63
55	58	55	55
57	61	51	54
61	56	40	36
33	31	43	52
51	58	53	63
48	41	48	51
28	32	54	43
42	48	22	29
39	42	41	39

39	44	40	36
37	33	40	41
52	54	48	55
67	67	44	46
55	55	46	39
39	42	68	67
55	54	51	52
43	41	47	44
48	40	17	17
47	47	57	59
47	46	59	57

Appendix G

Tennessee Self-Concept Scale

Standard Scores

Hypothesis 1--Self-Satisfaction

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
44	49	61	57
52	48	43	58
47	50	45	54
33	35	47	53
41	40	56	63
54	48	52	58
54	55	46	43
51	54	39	49
43	43	51	63
43	51	50	45
57	57	57	58
64	74	56	44
18	20	46	54
39	39	57	58
57	57	55	51
40	46	52	56
58	57	30	30
43	42	51	48

43	54	37	39
40	38	47	51
65	53	46	59
70	77	48	47
58	57	53	54
58	54	57	44
50	56	50	51
51	45	58	53
49	45	15	14
51	52	52	50
37	36	52	55

Appendix H

Tennessee Self-Concept Scale

Standard Scores

Hypothesis 1--Behavior

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
57	50	45	41
46	51	39	59
43	45	35	47
25	27	43	43
34	29	59	66
42	35	55	59
35	43	43	43
46	52	36	39
30	34	56	65
51	47	45	40
48	49	51	41
55	67	40	39
24	32	49	46
43	46	41	51
43	43	44	38
32	40	48	44
48	47	23	26
38	38	40	48

39	42	38	39
29	26	43	47
39	41	46	43
64	69	38	36
45	45	47	44
45	38	59	53
50	52	48	50
38	44	51	52
50	42	18	17
40	46	47	48
42	37	52	46

Appendix I

Age Data--Experimental and Control Groups

Age	Frequency	
	Experimental Group	Control Group
17	1	0
18	4	1
19	1	2
20	6	6
21	3	2
22	1	2
23	2	1
24	0	1
25	0	3
26	2	3
27	0	3
28	0	0
29	1	0
30	1	0
31	1	0
32	0	1
33	1	1
34	0	0
35	1	0
36	1	0

37		0	1
38		0	1
39		0	1
40		1	0
41		1	0
42		0	0
43		0	0
44		0	0
45		0	0
46		1	0
	Total	29	29

Appendix J

Career Maturity Inventory Raw Scores

Hypothesis 2

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
39	38	42	44
38	41	39	44
28	31	44	42
34	35	39	41
39	37	44	43
33	42	37	41
40	39	42	34
45	39	41	37
32	23	44	40
47	45	30	36
33	34	41	39
41	40	45	43
46	44	42	41
31	36	46	46
37	45	39	38
29	23	41	39
40	43	30	25
32	32	39	40
41	40	37	39

38	34	27	33
37	30	39	36
34	43	34	35
42	39	43	42
44	37	39	40
36	35	41	45
40	45	45	44
40	41	42	42
38	46	39	42
42	40	40	43

Appendix K

Adjective Check List Standard Scores

Hypothesis 3--Self-Confidence

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
57	65	50	45
37	37	47	47
38	57	43	49
48	53	38	43
59	59	61	53
48	50	53	40
36	33	58	48
53	51	57	66
27	44	48	46
28	41	49	45
44	39	61	63
62	66	45	50
66	62	60	57
42	48	58	64
62	71	49	51
39	36	53	58
43	48	50	57
44	42	66	61
41	43	60	47

50	50	45	51
42	50	53	58
65	57	57	59
44	45	47	37
51	46	42	49
39	43	61	60
44	49	66	51
63	57	64	53
53	47	59	66
51	58	76	77

Appendix L

Adjective Check List Standard Scores

Hypothesis 3--Personal Adjustment

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
42	37	38	48
48	46	51	61
49	54	51	62
61	53	51	33
59	61	35	45
58	50	64	58
52	47	44	45
52	48	43	28
55	60	49	49
46	54	45	43
38	31	55	55
58	53	44	31
44	36	36	28
41	53	46	58
53	52	45	55
31	24	41	41
39	57	55	59
43	46	58	56
45	61	25	32

33	44	45	36
57	67	44	46
49	41	55	55
60	57	50	54
70	61	55	63
47	45	45	48
58	57	46	54
50	44	24	15
50	49	56	57
63	56	51	47

Appendix M

Adjective Check List Standard Scores

Hypothesis 3--Autonomy

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
61	69	41	41
30	26	45	51
38	61	46	44
40	51	46	44
44	44	59	57
35	43	46	41
26	28	43	49
49	48	55	73
38	40	51	68
28	38	44	44
48	50	58	56
65	63	69	59
63	59	54	64
50	35	60	50
67	57	49	46
50	62	62	63
52	49	45	38
43	53	51	47
48	44	56	67

49	36	48	52
40	45	51	56
64	51	51	42
45	44	55	38
39	40	46	42
44	44	57	60
40	38	65	59
67	77	89	83
53	48	61	59
39	45	62	63

Appendix N

Adjective Check List Standard Scores

Hypothesis 3--Change

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
52	57	55	50
29	29	42	54
51	60	45	45
56	54	32	32
39	52	46	48
38	45	38	45
29	24	45	54
39	51	55	42
33	55	35	41
22	35	45	45
38	38	54	60
62	56	62	51
65	58	45	45
42	42	48	48
70	60	51	54
45	57	54	56
56	51	48	48
42	42	38	32
42	52	38	39

42	51	45	42
36	35	38	53
51	51	54	51
38	42	50	47
42	43	51	38
48	52	54	48
43	43	56	52
62	65	56	54
65	55	57	64
50	59	54	57

Appendix O

Process Orientation to Planning Indicator

Raw Scores

Hypothesis 4

Experimental Group		Control Group	
Pretest	Posttest	Pretest	Posttest
2	1	2	3
2	3	2	2
1	1	2	3.5
3	1.5	1	2
2	2	2	4
1	1	2	3
1.5	2	1	2
1	2	1	2
2	2	2	3
2	2	2	1
3	3	2	1
2	1	3	1
3	2	3	3
2	2	2	3
2	1	2	3
2	3	2	2
2	1	1	2
1	2	2	2

2	1	3	3
3	2	1	1
3	3	2	2
1	2	2	3
1	3	1	1
2	1	1	3
1	2	2	3
2	2	2	3
2	3	2	3
1	1	3	3
3	2	3	2

References

References

Alschuler, A. S. Radical psychological education. Keynote address. Williamsburg, Virginia, Virginia Personnel and Guidance Association Convention, 1975.

Anderson, A. R. Group counseling. Review of Education Research, 1969, 39, 209-226.

Arbuckle, D. Counseling and psychotherapy: An existential-humanistic view. Boston, Massachusetts: Allyn & Bacon, Inc., 1975.

Asbury, F. A. An experimental study of guidance treatments to accelerate vocational development in eighth grade males in Appalachia. Unpublished doctoral dissertation, University of Kentucky, 1967.

Astin, A. W., Panos, R. J., & Craeger, J. A. National norms for entering college freshmen--fall 1966. American Council on Education Research Reports, 1967, 2(1).

Axmaker, L. W. The effect of group counseling on the self-concept, on the motivation to achieve and on the proportion of dropouts among unselected community college students at Southwestern Oregon Community College. Unpublished doctoral dissertation, Oregon State University, 1970.

Battro, A. M. Piaget: Dictionary of terms. New York: Pergamon Press, 1973.

Baymur, F. B., & Patterson, C. H. A comparison of 3 methods of assisting underachieving high school students. Journal of Counseling Psychology, 1960, 7, 83-90.

Benjamin, L., & Walz, G. R. Enhancing the quality of life through personal empowerment. Impact, 3(6), 55-59.

Benson, A. N., & Blocker, D. H. The change process applied to career development programs. Personnel and Guidance Journal, 1975, 53, 656-661.

Berelson, B. Content analysis. In G. Lindzey (Ed.), Handbook of social psychology (Vol. 1). Reading, Massachusetts: Addison-Wesley Publishing Co., Inc., 1954.

Berelson, B. Content analysis in communication research. Glencoe, Illinois: Free Press, 1952.

Berlin, J. S., & Dies, R. R. Differential group structure: The effects on socially isolated college students. Small Group Behavior, 1974, 5, 462-472.

Bilovsky, D., McMasters, W., Shorr, J. E., & Singer, S. L. Individual and group counseling. Personnel and Guidance Journal, 1953, 31, 363-365.

Bouchillon, B. G. A comparison of four techniques in the modification of expressed self-concept for low achieving college students. Unpublished doctoral dissertation, University of Tennessee, 1970.

Bovee, C. C. A study of the preparation phase of the Presbyterian guidance program in the Synod of Georgia. Unpublished doctoral dissertation, University of Georgia, 1967.

Broedel, J., Ohlsen, M., Proff, F., & Southard, C. The effects of group counseling on gifted underachieving adolescents. Journal of Counseling Psychology, 1960, 7, 163-170.

Benjamin, L., & Walz, G. R. Enhancing the quality of life through personal empowerment. Impact, 3(6), 55-59.

Benson, A. N., & Blocker, D. H. The change process applied to career development programs. Personnel and Guidance Journal, 1975, 53, 656-661.

Berelson, B. Content analysis. In G. Lindzey (Ed.), Handbook of social psychology (Vol. 1). Reading, Massachusetts: Addison-Wesley Publishing Co., Inc., 1954.

Berelson, B. Content analysis in communication research. Glencoe, Illinois: Free Press, 1952.

Berlin, J. S., & Dies, R. R. Differential group structure: The effects on socially isolated college students. Small Group Behavior, 1974, 5, 462-472.

Bilovsky, D., McMasters, W., Shorr, J. E., & Singer, S. L. Individual and group counseling. Personnel and Guidance Journal, 1953, 31, 363-365.

Bouchillon, B. G. A comparison of four techniques in the modification of expressed self-concept for low achieving college students. Unpublished doctoral dissertation, University of Tennessee, 1970.

Bovee, C. C. A study of the preparation phase of the Presbyterian guidance program in the Synod of Georgia. Unpublished doctoral dissertation, University of Georgia, 1967.

Broedel, J., Ohlsen, M., Proff, F., & Southard, C. The effects of group counseling on gifted underachieving adolescents. Journal of Counseling Psychology, 1960, 7, 163-170.

Brolin, D. E. Agency settings for career guidance. Personnel and Guidance Journal, 1975, 53, 686-690.

Bugental, J. F. T. The third force in psychology. Journal of Humanistic Psychology, 1964 (Spring), 23-24.

Bujold, C. E. The role of self-concepts, occupational concepts, and reality considerations in the occupational choice of French-Canadian secondary school boys. Unpublished doctoral dissertation, Columbia University, 1972.

Buros, O. K. The seventh mental measurements yearbook. Highland Park, New Jersey: Gryphon Press, 1972.

Calia, V. F. A group guidance program in action. Junior College Journal, 1957, 27, 437-442.

Caplan, S. W. The effect of group counseling on junior high school boys' concepts of themselves in school. Journal of Counseling Psychology, 1957, 4, 124-128.

Chickering, A. W. Commuting versus resident students. San Francisco, California: Jossey-Bass Inc., 1974.

Collins, C., & McConnell, T. R. Junior college student personnel programs: What they are and what they should be. Washington, D. C.: American Association of Junior Colleges, 1967.

Coopersmith, S. The antecedents of self-esteem. San Francisco, California: Freeman, 1967.

Cordell, L. G. The effect of structured group counseling on the self-concept, attendance, and achievement of absentee-prone high school students. Unpublished doctoral dissertation, Ohio State University, 1973.

Corsini, R. J. Methods of group psychotherapy. New York: McGraw-Hill Book Company, 1957.

Cover, J. A. The relationship of alienation from society and selected variables to vocational maturity in male high school seniors. Unpublished doctoral dissertation, University of Oregon, 1968.

Crites, J. O. The career maturity inventory. In D. E. Super (Ed.), Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Crites, J. O. Career maturity inventory administration and use manual. Monterey, California: McGraw-Hill Book Company, 1973.

Crites, J. O. Career maturity inventory theory and research handbook. Monterey, California: McGraw-Hill Book Company, 1973.

Crites, J. O. Measurement of vocational maturity in adolescence: I. Attitude Test of the Vocational Development Inventory. Psychological Monographs, 1965, 72, 595.

Crites, J. O. Vocational psychology. New York: McGraw-Hill Book Company, 1969.

Crow, C. W. The effects of a vocational exploration group experience on control expectancy, self-esteem, and vocational maturity of high school students. Unpublished doctoral dissertation, Arizona State University, 1973.

Cuony, E. R., & Hoppock, R. Job course pays off. Personnel and Guidance Journal, 1954, 32, 389-391.

Cuony, E. R., & Hoppock, R. Job course pays off again. Personnel and Guidance Journal, 1957, 36, 116-117.

Dawson, R. J., Jr. MANOVA a multiple analysis of variance program. Unpublished programming memorandum, William and Mary Computer Center, March 1975.

English, T. W. A comparison of the effects of two methods of disseminating occupational information on the vocational maturity of senior high school students. Unpublished doctoral dissertation, University of Connecticut, 1974.

Feldman, H. S. The effects of a career planning experience on the vocational maturity, self-concept and vocational choice among inmates of penal institutions. Unpublished doctoral dissertation, Boston University, 1973.

Fitts, W. H. The self-concept and performance. Nashville, Tennessee: Counselor Recordings and Tests, 1972.

Fitts, W. H. Tennessee self-concept scale manual. Nashville, Tennessee: Counselor Recordings and Tests, 1965.

Flake, M. H., Roach, A. J., & Stenning, W. F. Effects of short-term counseling on career maturity of tenth-grade students. Journal of Vocational Behavior, 1975, 6, 73-80.

Fogel, A. J. Development of a replicable group vocational counseling procedure for use with community college students. Unpublished doctoral dissertation, University of California, Los Angeles, 1973.

Furth, H. G. Piaget and knowledge, theoretical foundations. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1969.

Garrison, R. K. The measurement of change in self-concept and personal adjustment as the result of brief career development counseling sessions. Unpublished doctoral dissertation, University of Northern Colorado, 1972.

Gazda, G. M., Duncan, J. A., & Meadows, M. E. Group counseling and group procedures--report of a survey. Counselor Education and Supervision, 1967, 6, 305-310.

Gazda, G. M., & Larsen, M. J. A comprehensive appraisal of group and multiple counseling research. Journal of Research and Development in Education, 1968, 1, 57-66.

Gearing, P. J., Sr. A study of selected effects of vocational group guidance and individual vocational counseling on adults in the curriculum of adult basic education. Unpublished doctoral dissertation, Florida State University, 1970.

Geisler, J., & Gillingham, W. The effects of a personal growth group experience. National Catholic Guidance Conference Journal, 1971, 15, 183-186.

Gilliland, B. E. An evaluation of the effects of small group counseling with Negro adolescents. Unpublished doctoral dissertation, University of Tennessee, 1966.

Ginzberg, E. Toward a theory of occupational choice. Personnel and Guidance Journal, 1952, 30, 491-494.

Goodson, W. D. A study to determine the value of vocational college orientation groups by a comparison of various approaches. Unpublished doctoral dissertation, Brigham Young University, 1969.

Gough, H. G. The adjective check list as a personality assessment research technique. Psychological Reports, 1960, 6, 107-122.

Gough, H. G., & Heilbrun, A. B. Adjective check list manual. Palo Alto, California: Consulting Psychologists Press, 1965.

Graves, T. D. A study of vocational maturity and college students' certainty and commitment to career choice. Unpublished doctoral dissertation, University of Northern Colorado, 1974.

Greenhaus, J. H. Self-esteem as an influence on occupational choice and occupational satisfaction. Journal of Vocational Behavior, 1971, 1, 75-83.

Gribbons, W. D., & Lohnes, P. R. Career development. Interim report, Regis College, Grant No. OEG-1-7-062151-0471, U.S. Department of Health, Education, and Welfare, October 1968.

Gunter, K. C. Differential effects of three types of career guidance upon community junior college students' self-concepts and vocational crystallization. Unpublished doctoral dissertation, University of Southern Mississippi, 1975.

Gysbers, N. C., & Moore, E. J. Beyond career development--life career development. Personnel and Guidance Journal, 1975, 53, 647-652.

Hall, C. S., & Lindsey, G. Theories of personality. New York: John Wiley and Sons, Inc., 1957.

Hall, D. T., & Mansfield, R. Relationships of age and seniority with career variables of engineers and scientists. Journal of Applied Psychology, 1975, 60, 201-210.

Hamachek, D. E. Encounters with the self. New York: Holt, Rinehart, and Winston, Inc., 1971.

Hamilton, G. K. The changes in perception of self resulting from a small group laboratory experience as measured by a semantic differential. Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, 1971.

Hansen, S. L. A model for career development through curriculum. Personnel and Guidance Journal, 1972, 51, 243-250.

Hanson, J. T., & Sanders, D. L. Differential effects of individual and group counseling on realism of vocational choice. Journal of Counseling Psychology, 1973, 20, 541-544.

Harmon, L. W. Problems in measuring vocational maturity: A counseling perspective. In D. E. Super (Ed.), Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Harris, J. W., Jr. The effect of vocational development and family social status on the academic performance of male freshmen at Middle Tennessee State University. Unpublished doctoral dissertation, University of Tennessee, 1966.

Havighurst, R. J. Developmental tasks and education. New York: David McKay, 1952.

Healy, C. C. Evaluation of a replicable group career counseling procedure. Vocational Guidance Quarterly, 1974, 23, 34-40.

Hewer, V. H. Group counseling, individual counseling, and a college class in vocations. Personnel and Guidance Journal, 1959, 37, 660-665.

Hilton, T. L. Using measures of vocational maturity. In D. E. Super (Ed.), Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Hoyt, D. P. An evaluation of group and individual programs in vocational guidance. Journal of Applied Psychology, 1955, 39, 26-30.

Hoyt, K. B. Career education: What it is and how to do it. Salt Lake City, Utah: Olympus, 1972.

Isabelle, L. A., & Dick, W. Clarity of self-concepts in the vocational development of male liberal arts students: An abstract. Canadian Psychologist, 1969, 10, 20-31.

Ivey, A. E., & Alschuler, A. S. An introduction to the field. Personnel and Guidance Journal, 1973, 51, 591-597.

Jackson, A. M. The effects of three group approaches in effecting change among black students. Unpublished doctoral dissertation, Indiana University, 1971.

Jackson, L. D. The effect of a formal program of career exploration on the vocational maturity of college freshmen. Unpublished doctoral dissertation, University of Georgia, 1971.

Jennings, W. L., & Walters, R. E. Psychological education at the community college: The Life Career Development System. Virginia Personnel and Guidance Journal, 1975, 3, 39-42.

Johnsgard, K. W., & Muench, G. A. Group therapy with normal college students. Psychotherapy: Theory, Research, and Practice, 1965, 2, 114-116.

Jones, G. B., Hamilton, J. A., Ganschow, L. H., Helliwell, C. B., & Wolff, J. M. Planning, developing and field testing career guidance programs. Palo Alto, California: American Institutes for Research, 1972.

Kemp, G. A. A comparative evaluation of the effectiveness of group guidance and individual counseling with freshmen. Unpublished doctoral dissertation, North Texas State University, 1962.

Kerlinger, F. N. Foundations of behavioral research. New York: Holt, Rinehart, and Winston, Inc., 1973.

Koos, L. V. The community college student. Gainesville, Florida: University of Florida Press, 1970.

Korman, A. K. Self-esteem as a moderator of the relationship between self-perceived abilities and vocational choice. Journal of Applied Psychology, 1967, 51, 65-67.

Kyser, M. L. G. An exploratory study of the effects of group counseling upon community college students who are living at home. Unpublished doctoral dissertation, University of Michigan, 1971.

Lathey, R. K. A comparison of change toward self-actualization in marathon group counseling and traditional group counseling. Unpublished doctoral dissertation, North Texas State University, 1971.

LeMay, M. L. Research on group procedures with college students: A review. Journal of College Student Personnel, 1967, 8, 286-295.

Leonard, R. L., Walsh, W. B., & Osipow, S. H. Self-esteem, self-consistency, and second vocational choice. Journal of Counseling Psychology, 1973, 20(1), 91-93.

Levin, E. M. Effects of a structured and nonstructured small group experience on counselor candidates' self-concept, interpersonal orientation, and perceptions of the group experience. Unpublished doctoral dissertation, University of Iowa, 1973.

Lewis, E. C. The psychology of counseling. New York: Holt, Rinehart, and Winston, Inc., 1970.

Lindzey, G. (Ed.). Handbook of social psychology (Vol. 1). Reading, Massachusetts: Addison-Wesley Publishing Co., Inc., 1954.

Lowenstein, N., & Hoppock, R. High school occupations course helps students adjust to college. Personnel and Guidance Journal, 1955, 34, 21-23.

Mackeen, B. A., & Herman, A. Effects of group counseling on self-esteem. Journal of Counseling Psychology, 1974, 21, 210-214.

McReynolds, P. (Ed.). Advances in psychological assessment, volume 3. San Francisco, California: Jossey-Bass Inc., 1975.

Maier, D., & Herman, A. The relationship of vocational decidedness and satisfaction with dogmatism and self-esteem. Journal of Vocational Behavior, 1974, 5, 95-102.

Malacos, J. A. Community college career planning: An alternative approach. Program presentation at the annual meeting of the American Personnel and Guidance Association, New York, March 1975.

Marland, S. P., Jr. America's need for career education. Occupational Outlook Quarterly, 1972, 16(2), 2-4.

Masefield, J. The collected poems of John Masefield. London, England: William Heinemann, Ltd., 1932.

Masterson, S. The adjective checklist technique: A review and critique. In P. McReynolds (Ed.), Advances in psychological assessment, volume 3. San Francisco, California: Jossey-Bass Inc., 1975.

Mead, G. H. Mind, self and society. Chicago: University of Chicago Press, 1934.

Medsker, L. L. The junior college: Progress and prospect. New York: McGraw-Hill Book Company, 1960.

Medsker, L. L., & Tillery, D. Breaking the access barriers. New York: McGraw-Hill Book Company, 1971.

Meyer, B. E. The impact of a human development course on college students' self-concept, purpose in life, and interpersonal relations. Unpublished doctoral dissertation, University of Miami, 1975.

Miller, H. J. The effects of integration on rural Indian pupils. Final report, University of North Dakota, Grant No. OEG-0-8-078397-1881, U.S. Department of Health, Education, and Welfare, June 1968.

Miller, J. V., & Benjamin, L. New career development strategies: Methods and resources. Personnel and Guidance Journal, 1975, 53, 694-697.

Monroe, C. R. Profile of the community college. San Francisco, California: Jossey-Bass Inc., 1973.

Murray, H. A. Explorations in personality. New York: Oxford University Press, 1938.

Myers, R. A., Lindeman, R. H., Thompson, A. S., & Patrick, T. A. Effects of educational and career exploration system on vocational maturity. Journal of Vocational Behavior, 1975, 6, 245-254.

Nemecek, F. D. A study of the effect of the human potential seminar on the self-actualization and academic achievement of college underachievers. Unpublished doctoral dissertation, Loyola University of Chicago, 1972.

Nie, N. H., Hull, C. H., Jenkins, J. G., Steinbrenner, K., & Bent, D. H. Statistical package for the social sciences second edition. New York: McGraw-Hill Book Company, 1975.

O'Banion, T., Thurston, A., & Gulden, J. Student personnel work: An emerging model. Junior College Journal, 1970 (November), 41-42.

Oliver, M. C. A study of the effects of behavioral group counseling on self-actualization. Unpublished doctoral dissertation, University of Southern Mississippi, 1970.

Oman, R. N. The self-concept of occupational ability and related characteristics in community college occupational and academic students. Unpublished doctoral dissertation, Michigan State University, 1971.

Pinkney, J. W. A comparison of structured and nonstructured group and individual vocational counseling using client satisfaction and an individualized measure of counseling effectiveness. Unpublished doctoral dissertation, University of Iowa, 1973.

Putnam, B. A., & Hansen, J. C. Relationship of self-concept and feminine role concept to vocational maturity in young women. Journal of Counseling Psychology, 1972, 19, 436-440.

Rainer, M. The student personnel situation. Junior College Journal, 1966 (February), 36, 6-7.

Reich, C. A. The greening of America. New York: Bantam, 1971.

Resnick, H., Fauble, M. L., & Osipow, S. H. Vocational crystallization and self-esteem in college students. Journal of Counseling Psychology, 1970, 17, 465-467.

Rodebaugh, H. D. Life career potentials, a process utilizing the Life Career Development System with community college special needs students. Paper presented at the annual meetings of the American College Personnel Association and the American Personnel and Guidance Association, Atlanta, Georgia, and New York, March 1975.

Roe, A. Psychology of occupations. New York: John Wiley and Sons, Inc., 1956.

Roueche, J. E., & Kirk, W. Catching up: Remedial education. San Francisco, California: Jossey-Bass Inc., 1973.

Ryan, F. L. Editorial. Personnel and Guidance Journal, 1975, 53, 716.

Scarr, S. The adjective checklist as a personality assessment technique with children: Validity of the scales. Journal of Consulting Psychology, 1966, 30, 122-128.

Seward, R. F., & Wilkinson, J. S. The life career development system comes to central Virginia community college. Unpublished research report, Central Virginia Community College [n.d., No. 3-75, reproduction].

Shaw, M. C., & Wursten, R. Research on group procedures in schools: A review of the literature. Personnel and Guidance Journal, 1965, 44, 27-34.

Shepherd, J. C. An evaluation of group and individual models of career counseling. Unpublished doctoral dissertation, University of Utah, 1973.

Sheppard, D. I. The measurement of vocational maturity in adults. Journal of Vocational Behavior, 1971, 1, 399-406.

Smith, R. D. A comparison of experimental group guidance and individual counseling methods to facilitate college students' vocational development. Unpublished doctoral dissertation, Southern Illinois University, 1971.

Smith, R. L., & Walz, G. R. (Eds.). Developing students' potentials. Washington, D. C.: Capitol Publications, 1974.

Snadowsky, A. M., & Belkin, G. Affecting change in the phenomenal field: A cognitive technique used during an intensive group experience. Small Group Behavior, 1974, 5, 506-512.

Snead, R. F., Diment, R. C., Hummel, E. J., Marshall, L. R., & Thorpe, J. L. Life career planning for a community college. Virginia Personnel and Guidance Journal, 1974, 2, 36-40.

Super, D. E. The career development inventory. In D. E. Super (Ed.), Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Super, D. E. (Ed.). Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Super, D. E. Psychology of careers. New York: Harper and Brothers, 1957.

Super, D. E. Vocational maturity theory. In D. E. Super (Ed.), Measuring vocational maturity for counseling and evaluation. Washington, D. C.: American Personnel and Guidance Association, 1974.

Super, D. E., & Overstreet, P. L. The vocational maturity of ninth grade boys. New York: Teachers College Bureau of Publications, 1960.

Thoene, C. J. The effects of counseling and career exploration on vocational choice as indicated by a follow-up study of Springfield's Trajectory Occupational Program. Unpublished doctoral dissertation, University of South Dakota, 1974.

Thompson, W. Correlates of the self-concept. Nashville, Tennessee: Counselor Recordings and Tests, 1972.

Thoni, R. J., & Olsson, P. M. A systematic career development program in a liberal arts college. Personnel and Guidance Journal, 1975, 53, 672-675.

Toffler, A. Future shock. New York: Random House, Inc., 1970.

Virginia Community College System. Population profiles of Virginia community college regions. Richmond, Virginia: Author, 1974.

Volsky, T., & Hewer, V. H. A program of group counseling. Journal of Counseling Psychology, 1960, 7, 71-73.

Walsh, W. B., & Osipow, S. H. Career preferences, self-concept, and vocational maturity. Research in Higher Education, 1973, 1, 287-295.

Walz, G. R. Prospectus life career development system. Ann Arbor, Michigan: Human Development Services, 1974.

Walz, G. R. Swinging into the future. Personnel and Guidance Journal, 1975, 53, 712-716.

Walz, G. R., & Benjamin, L. The life career development system. In G. R. Walz, R. L. Smith, & L. Benjamin (Eds.), A comprehensive view of career development. Washington, D. C.: American Personnel and Guidance Association, 1974.

Walz, G. R., Smith, R. L., & Benjamin, L. (Eds.). A comprehensive view of career development. Washington, D. C.: American Personnel and Guidance Association, 1974.

Warters, J. Group guidance. New York: McGraw-Hill Book Company, 1960.

Watts, A. W. Psychotherapy east and west. New York: Pantheon Books, 1961.

Webber, J. R. Systematic career counseling process: A procedural outline for use by counselors in assisting students in career planning. Livonia, Michigan: Schoolcraft Community College, 1973.

Westbrook, F. D. A comparative study of three methods of group vocational counseling. Unpublished doctoral dissertation, Indiana University, 1971.

White, J. C. A study of human potential laboratory groups in a community college setting: Group leader style, group composition and participant outcomes. Unpublished doctoral dissertation, University of Iowa, 1975.

Wigent, P. A. A study of personality variables related to career decision-making abilities of community college students. Unpublished doctoral dissertation, University of Michigan, 1972.

Wildblood, R. W. The relationship between structured encounter group experience and reported self-concept in female college students. Unpublished doctoral dissertation, Purdue University, 1972.

Wollman, M., Johnson, D. A., & Bottoms, J. E. Meeting career needs in two-year institutions. Personnel and Guidance Journal, 1975, 53, 676-679.

Woodhouse, D. J. An examination of the immediate and long range effects of participation in a self-exploration group upon participants' self-acceptance and acceptance of others. Unpublished doctoral dissertation, University of North Carolina at Chapel Hill, 1974.

Wright, E. W. Multiple counseling: Why? when? how? Personnel and Guidance Journal, 1959, 37, 551-557.

Yoder, M., & Beals, L. Student personnel services in the west. Junior College Journal, 1966 (October), 37, 40-41.

Young, T. R. New sources of self. New York: Pergamon Press, 1972.

Zelkowitz, R. S. The construction and validation of a measure of vocational maturity for adults. Unpublished doctoral dissertation, Columbia University, 1975.

Zongker, C. E. The effect of selected group counseling approaches on the self-concept of student teachers. Unpublished doctoral dissertation, Texas Tech University, 1973.

Vita

Name: Michael Joseph Johnson

Born: March 1, 1944, Grundy, Virginia

EDUCATION

Graduate

Ed.D. Degree (Counseling), 1976, College of William and Mary, Williamsburg, Virginia

Member of Phi Delta Kappa (Educational National Honorary Society)

Advanced Certificate (Counseling), 1975, College of William and Mary

M.S. Ed. Degree (School Psychology), 1974, Madison College, Harrisonburg, Virginia

Member of Psi Chi (Psychological National Honorary Society)

Undergraduate

Supplementary Undergraduate work: School of Education, University of Virginia, Charlottesville, Virginia (1968)

B.A. Degree, 1967, College of William and Mary

Graduated second in class

Supplementary Undergraduate work: Instituto Technologico de Monterrey, Monterrey, Mexico (1965)

A.A. Degree, 1965, Junior College of Broward County, Fort Lauderdale, Florida

Graduated with highest honors

Member of Phi Theta Kappa (Scholastic Honorary Society)

EXPERIENCE

1975-1976	Graduate Assistant, College of William and Mary, Williamsburg, Virginia
1973-1974	Graduate Assistant, Madison College, Harrisonburg, Virginia
1972	Mapping team, Mayan Archaeological site, Yaxha, Guatemala
1971-1972	Construction worker, Sydney, Australia
1970-1971	Teacher and Caseworker, Seven Gables School, California, Maryland (Adolescent Delinquents)
1960-1963	U.S. Army Paratroops, Fort Bragg, North Carolina

Part-time

1976	Part-time Instructor (Group Counseling), Thomas Nelson Community College, Hampton, Virginia
1975-1976	Substitute Instructor (Counseling), College of William and Mary
1975-1976	Assistant Editor, Together, a Publication of the Association for Specialists in Group Work (ASGW), a Division of the American Personnel and Guidance Association, Washington, D. C.
1974	Counseling Practicum, Thomas Nelson Community College, Hampton, Virginia
1973-1974	Title VI Coordinator, Ottobine Elementary School, Ottobine, Virginia