THE EFFECTS OF COLLABORATIVE TEACHING ON COGNITIVE
COMPONENTS OF THE CAREER DEVELOPMENT PROCESS OF
BEGINNING COMMUNITY COLLEGE STUDENTS

by

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(ABSTRACT)

The major purpose of this study was to investigate whether a career-oriented, freshman English class (WSACP), was beneficial in increasing student cognitive complexity beyond normal maturational development. Cognitive complexity was assessed along the Perry scheme of intellectual and ethical development by the Measure of Intellectual Development (MID). A pretest/ posttest quasi-experimental design was implemented to compare cognitive changes among an experimental (n=23) and two control groups (n=21/n=23). A secondary purpose of this study was to investigate the effects of WSACP on student retention rates.

This study was based on the assumptions that an effective college-level career development program would: (a) be developmentally oriented, focusing on cognitive maturation through an emphasis on the writing process, (b) be taught within the regular academic curriculum, and thus

be taken for academic credit, and (c) be collaboratively designed and taught.

Using analysis of variance (ANOVA) procedures, the study found that the general cognitive complexity of the experimental group increased at significantly higher rates (at the .05 level) than that of the two combined control groups. The retention results, although encouraging, revealed no statistically significant differences between WSACP and 266 other freshman students.

The major recommendations emanating from this study were: (a) institutions of higher education should encourage the development of "collaborative" courses in the areas of English and career development. Research should be conducted to substantiate the career development results of this study, and investigate the effects of such an approach on student writing, (b) the dimension of cognitive complexity should be included in the development of career programs, and (c) first-term career development activities should be included in any comprehensive retention program.

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CHAPTER I


INTRODUCTION


Prior to industrialization, work roles were clearly
defined. These roles were often established at an early
age, many times at birth. Preparation for work consisted
primarily of training in the "content" of a single career.
Today's technology has made the organization of work and the
division of labor increasingly complex (Appalachia Educa-
tional Laboratory [AEL], 1980).

Within this changing occupational context, college
students face a major life challenge: making effective
career decisions. Knefelkamp and Slepitza (1976) argued
that one of the primary identity issues facing the college
student involves career development -- "the process of
career choice and decision making as it relates to one's
concept of self" (p. 53). The successful negotiation of
this difficult process is critically important from a number
of perspectives, outlined in the following section.

**Background**

Career Development: A Societal Perspective

The nature of our rapidly changing and increasingly complex technological society has created upheaval in our occupational and societal structures. Not only has technology changed the nature of work, it has also affected our lifestyles and standard of living. Values long held sacred by society, such as single employee households, have weakened or shifted in the face of these rapid changes. Widely fluctuating business cycles and other economic-related variables such as defense spending, civil service budget cuts, and energy availability and development have greatly impacted issues of employment for both sexes (Department of Labor [DOL], 1988). Economic stresses, including inflation, unemployment, underemployment, and wide-spread worker dissatisfaction characterize our changing occupational and societal structure. Decisions concerning occupation have become a risky business. Jobs that exist today may no longer be available next year. Local job markets vary considerably. Approximately one of nine workers change jobs each year and many people will have six or seven careers in the course of a lifetime (DOL, 1988). These rapid changes may have surpassed the rate at which some individuals can effectively prepare and cope with career and life decisions

(Cooke, 1982). Certainly, for most of our population, modern-day existence presents enormous challenges to living and working. In striving to meet these challenges, decisions about career are becoming increasingly important. In fact, it may well be that very few decisions that people make are more critical to future well-being than is the selection of career (DOL, 1988).

These new realities have dictated a need for extensive training and re-training for tomorrow's careers. However, it may no longer be sufficient, as it once was, to merely "train" in the "content" of a skill or career. "Career" can no longer be seen as a single decisional event. According to many, such as Morrill and Forrest (1970), and Sheese and Radovanovic (1984), it now is becoming increasingly important to "train" in the "process" of career decision making and development.

In recognition of these realities society has placed greater emphasis on education, training, employability, and on developing career planning and decision skills -- the "process" of career. Many facets of society, including community colleges, have responded to this increasing emphasis in varying ways. Government has stepped up efforts in providing career-related research statistics, job information, and employment services. Trade associations, unions, and industrial organizations have increased their

efforts in providing information, training, and other
support services (DOL, 1988). The management of "human
resources" has become a growing concern in corporate board-
rooms (Basta, 1985).

## Career Development: The Community College Perspective

As a reflection of increasing societal emphasis on
career development, many states have mandated their commun-
ity college systems to assist students in matters of career
planning, decision making, and occupational training (T.R.
Niles, Dean, NVCC, personal communication, May 13, 1988).
In addition to this state-mandated philosophical mission,
Chickering and Thomas (1984) argued that, among institutions
of higher education, the community college is uniquely
suited to facilitate the growth of many critical aspects of
the human and career development processes. These important
aspects, such as identity, autonomy, purpose, and the
development of intellectual and moral competence can and
should be of primary importance in the planning and estab-
lishment of community college programs (Chickering & Thomas,
1984). As well as long being cherished goals of the lib-
eral education tradition, these dimensions of human devel-
opment can all be considered critical aspects of the career
development process.

In addition to intensified societal concern, state
mandated requirements, and philosophical considerations,

some pragmatic factors such as retention have also led to an
increasing community college involvement in student career
development.


## Career Development: The Students' Perspective

The literature indicates that most students choose to
attend college for career related reasons. In a survey of
incoming freshmen at one college, Campbell (1980) found that
over 91% cited job preparation as a reason for enrollment.
Of this 91%, 43% claimed career and job preparation as the
sole reason for college attendance. Most of the other
students, as a rationale for attending college, coupled
career preparation with other factors such as personal
conviction or intellectual development. Only 8.7% made no
mention of career-related factors as a reason for pursuing a
college education. Campbell concluded that students go to
college largely because they feel it is essential to obtain
well paid, stimulating, and prestigious careers. A similar
study, conducted by Carney and Barak (1976), revealed that
the greatest concern students had in the context of their
college careers involved issues of career choice and acade-
mic major.

The numbers of non-traditional students, such as adults
and minorities, has been growing steadily in recent years
(Northern Virginia Community College [NVCC] (1987a).

Research indicates that the major reason this fast growing segment of the higher education population becomes involved in community college education is related to issues of career and employment (AEL, 1986).

In summary, it is evident that student career development, and the delivery of effective career-related services, are critical considerations from a number of perspectives. From the various viewpoints of society, the community college, and, especially, the student, there emerges a common thread -- the importance of the individual developing the skills and behaviors necessary to make effective career decisions.

## Statement of the Problem

Career counselors have always viewed as important a focus on client assessment in such dimensions as interests, abilities, values, and needs in the facilitation of career development (Knefelkamp & Slepitza, 1976). More recently, many researchers have argued for the inclusion of cognitive development in the assessment and facilitation of the career process. Perry (1970, 1981) posited that such dimensions as responsible, self-determined behavior, and committed and mature choice are strongly related to the ability to think critically in a relative world devoid of absolute truth and

knowledge. Perry believes that the ability to make choices with understanding and commitment in such a relative world can best be understood from a framework of intellectual development. He contends that higher levels of cognitive complexity lead to better choices and an increased possibility of finding more congruent and satisfying career experiences.

Other authors have also offered viewpoints similar to Perry's that link cognitive complexity and the career development process (Brabeck & Welfel, 1985; Broughton, 1978; Edelstein & Noam, 1982; Fischer, 1980; Kitchner & King, 1981; Labouvie-Vief, 1982; Moshman & Timmons, 1982). These authors have posited that the capacity for personal responsibility and mature and committed choice may best be understood as being consistent with a student's level of intellectual development.

From the work of these researchers in the area of cognitive stage development, it seems essential to specifically include the dimension of cognitive complexity in the understanding, assessment, and facilitation of student career development. As Knefelkamp and Slepitza (1976) argued, "it is now appropriate to expand the definition of "process" in career development and to add an additional individual difference factor for the counselor to consider: the level of cognitive complexity with which the student approaches the career development task" (p. 53).

## Problems with Career Development Delivery Systems

Over the past several decades many career course formats in institutions of higher education have evolved from the major theories of career development described by Osipow (1983). These courses have attempted to help students in the primary identity task of making career decisions. Some of these approaches concentrate on matching client and occupational characteristics. Some simply introduce career information and/or concentrate on effective job-seeking behaviors. Other approaches concentrate on teaching decision making skills in reference to individual assessment and career information introduced by a counselor. Some career courses concern themselves with decision making skills in general as a way of facilitating specific career decisions. Others emphasize a psychoeducational process-- the teaching of broad competency skills within a context of psychosocial development. Some recently developed approaches attempt to link decision making skills to various models of human stage development, such as Perry's (1970) scheme of intellectual and ethical development.

A review of the literature revealed that many different types of approaches have shown effectiveness in the facilitation of various facets of career development (Brosnan, 1981; Campbell, Connell, Boyle, & Bhaerman, 1983; Devlin, 1974; Garrett, 1984; Greenwood, 1983; Healy, 1984; Rayman,

1983; Rodriquez, 1986; and Schenk, Johnston, & Jacobsen, 1979). However, very few approaches have included the dimension of cognitive complexity.

Additionally, a review of the literature revealed that many problems remain in the conception and delivery of career planning and decision making services in institutions of higher education. Some of the more important of these problems are outlined below:

1. Career development programs and services tradition- ally have reached only a limited number of students (Koehn, 1978). Professional college-based career services and resources have been severely under-utilized compared with student reliance on such sources as parents and friends (Pendar, 1981).

2. "Process" oriented career programs, such as those dealing with development, decision making, needs and values clarification, etc., as compared with "content" related programs such as job hunting, were the type of activities suffering the most from vacillating student interest and attendance (Koehn, 1978).

3. Subject matter that is construed by students as being outside of the traditional academic curriculum has often been relegated to an "inconsequential" status (Mackes & Beidler, 1983). Most career development programs have been "voluntary" and not offered for regular college credit, apparently further adding to low student interest in career

process activities (Haney & Howland, 1978).

4. Students that appeared most in need of career services were least likely to volunteer for such activities (Carney & Barak, 1976; Pendar, 1981).

## Student Retention: Relationship with Career Development

During the 1980's a declining pool of traditional age college students has become noticeable (NVCC, 1987a). The Institute of Education, the research branch of the U.S. Department of Education, claims there is currently an intense competition among publicly financed colleges for a diminishing number of potential students (Staff, Career Choice Newsletter, 1987). Over the past several years community colleges have been greatly concerned with these enrollment declines and have shifted emphasis towards the area of student retention (NVCC, 1987a). Research indicates that the typical community college loses approximately 35% of its students 20 years of age and older between the initial inquiry/submission of an admissions application, and actual class registration (AEL, 1986). Of those students who do register, an additional 16% drop out between the first and second term. Research by NVCC's Office of Institutional Research sheds further light on the problem: of 9,700 students tracked at NVCC for 17 consecutive quarters (ending Winter quarter, 1985) 29% enrolled for only one term and 59% enrolled for three quarters or less (NVCC, 1987b).

Allbritten (1983) in his studies of freshmen students found attrition rates as high as 40%. He concluded that one of the factors strongly associated with retention is the quality of student career decision making. Healy (1984) also found that retention could be increased by helping students achieve higher levels of career maturity.

Besides obvious benefits to society and students, increasing retention has pragmatic ramifications for higher education institutions. On a very basic level, when community colleges lose students, they also lose state financial support and faculty positions. "Enrollment declines threaten budgets, capital outlay requests, salaries and positions since most college funding is enrollment driven" (NVCC, 1987a). It is evident, then, that the community colleges' involvement with the issue of retention, and the relationship of career development and quality of career decisions to student retention, are legitimate concerns from the standpoint of community college stability.

In summary, this section has outlined some prominent problems with traditional career program delivery systems. Additionally, the lack of process/cognitive-developmental oriented interventions and the need for effective retention strategies has been noted. These problem areas suggested the task at hand: developing a retention-enhancing career course that would include the dimension of intellectual

maturation. An effective career course would also have the capacity to respond to problems typically found with traditional "delivery" systems.

## Rationale for the Present Study

Schenk et al. (1979) argued that evidence supporting the effectiveness of career development programs is so strong that the question is no longer "can we increase student vocational maturity?", but rather, "what is the most efficacious way of doing so?" Distillation of research suggested that there may be no one particular theoretical stance or approach that is totally effective for all people and situations (Hutchins, 1979, 1984). Hutchins argued that the counseling profession has moved beyond the point where narrow approaches to assisting human development are appropriate. The challenge is to address the critical task of finding what works, for whom, in what stage of development, and in what context (Frank, 1981; Frank & Dietz, 1978; Mahoney, 1981; Staats, 1983; Wachtel, 1977, and Ward, 1983).

In exploring the question of "what works, for whom" in relation to cognitive components of career development, Perry's (1970, 1981) model of intellectual and ethical development appears to offer appropriate guidance. Perry offered a conceptualization of human and career development

based upon stages of increasing cognitive complexity. The progression of development is from an absolute view of knowledge and values to a complex and relative perspective. Perry views intellectual development, or "complexity", as proceeding through nine stages or positions. Appendix A presents an outline of the Perry scheme. Research conducted by Perry (1970), and Moore (1985), has revealed that most freshmen students enter college around "Perry" position 2 and leave as seniors between levels 3 and 4, or in a stable position 4. Obviously, career decisions can and are made at any level of "complexity". However, "self-directedness" and a "sense of agency/personal responsibility", attributes considered essential by such authors as Morrill and Forrest (1970) for making and pursuing satisfying career choices, start emerging, as a function of cognitive complexity, around position 4 (Perry, 1970).

Therefore, in attempting to expand the definition of career process, and include intellectual maturity in this consideration, the construct of cognitive complexity was explored. The primary focus of this study became the development of students' overall (general) cognitive structure (according to Perry), with an ultimate intent of facilitating development within the specific conceptual domain of career. Sheese and Radovanovic (1984) argued that one implication of a stage development model such as Perry's is

that when there is advancement in cognitive structure or
level of thinking in one environment, this has a positive
effect upon general development. Growth in "general"
structure, in turn, stimulates advancement in more specific
conceptual areas.

From these theoretical and research perspectives it
seemed logical to hypothesize that by focusing on the cogni-
tive development of a specific content area such as career,
one would be able to positively impact both the narrow
domain of career and the overall development of cognitive
structure.

## Rationale for Course Delivery System

In responding to the problems with career development
delivery systems that were outlined earlier, the research
suggested several credible possibilities. One promising
approach to improving the efficacy and relevancy of struc-
tured career programs may involve linking the career devel-
opment process to the traditional academic curriculum. The
literature suggested that relevancy and value attached to
career services by students could be increased by linking
career development efforts to the traditional academic
curricula within a credit format (Haney & Howland, 1978;
Mackes & Beidler, 1983). This linkage could increase the
"resource base" by utilizing the skills of both academic
faculty and student development professionals. Mackes and

Beidler (1983) also suggested that such interdisciplinary collaboration could lessen "boundary distinctions" and give students a heightened sense of the importance of both student development activities and their own personal and career development. AEL (1980) has also argued that the "steps" of the career planning process are particularly amenable to influence through a curricular approach.

One of the more promising academic areas that career programs could link with might be freshman English. Adicks (1973) stated a strong belief that "the required English course is one of the best places to assist with career guidance, indeed, in schools where the placement office and the counseling center lack personnel to offer regular group seminars in career choice, it may be the only place" (p.2).

Ivey (1980) suggested that language and language systems would become increasingly important to the counseling profession in the facilitation of human growth and development. He postulated that through the detailed analysis of sentences, syntax, and grammar, the operation of decision processes would become more apparent. Denzin (1978) stated that human behavior can be observed at two levels, the symbolic and the behavioral; understanding and impacting human behavior becomes a function of understanding the range and variety of symbols used. Kelly (1961) pointed out that to understand an individual's environmental trans-

actions one would have to know how the individual thinks, and that thought processes are most obviously and clearly represented by the symbols used in language.

In terms of possibly linking the writing class to issues of career and cognitive development, Krupa (1982) stated that movement through the Perry scheme seems to closely parallel development in writing ability. The writing class, then, has the potential of becoming the epitome of cognitive and career development by directly challenging students to move towards intellectual maturity.

Retention

Reasons for persisting in college are strongly related to the areas of career and employment (Allbritten, 1983; Healy, 1984). It appears logical to assume that if institutions of higher education are meeting student career development needs in meaningful ways, then student retention will be increased.

Various studies of student retention (Beal & Noel, 1980; Theophilides, Terenzini & Lorang, 1984) have highly correlated the quality of first quarter/year experience with student retention rates. This suggests that students retained after the first quarter of enrollment remain as a result of a satisfactory initial experience. These factors indicate that retaining students is related to meeting the

career development needs and concerns of beginning-level college students.

## Research Questions

Two research questions were considered in this study:

1. Would a first-term, freshman-level, collaboratively taught college English course, "Writing for Self Assessment and Career Planning (WSACP), significantly affect student cognitive complexity, beyond normal maturational develop- ment, as assessed along the Perry scheme of intellectual and ethical development?

2. Would the WSACP course be effective in increasing student retention rates, as compared to other beginning- level college students?
(Course overview and theoretical foundations of WSACP are presented in Chapter II. Outline and syllabus of WSACP are presented in Appendices D and G.)

## Definition of Terms

The following terms were used in this study:

### General Terms

Appalachia Educational Laboratory. (AEL) One of several regional laboratories established by the U.S. Office of Education in 1966 with a designed purpose of meeting the

research and development needs of its regional education systems.

Career Planning and Decision Making. (CPDM) College-level career course developed by AEL. Many of the activities in WSACP have their genesis in CPDM, with adjustments and elaborations made to provide a working "fit" with the writing/curricular approach of the present study.

Center for Applications of Developmental Instruction. (CADI) An informal organization, established in 1982 for education, research, and services focusing on assessment of the Perry scheme and higher education interventions related to it. CADI's major function is to distribute and score the Measure of Intellectual Development (MID).

Measure of Intellectual Development. (MID) The instrument used in this study to measure changes in cognitive complexity along the Perry scheme. The MID was created by L. Lee Knefelkamp and Carol Widick at the University of Minnesota in the early 1970's. It is currently the most widely used and best researched instrument for the assessment of the intellectual dimension of the Perry scheme.

Northern Virginia Community College. (NVCC) The setting for the research study.

Woodbridge Campus. One of NVCC's five campuses and the specific site where the research was conducted.

Writing for Self-Assessment and Career Planning. (WSACP) The title of the experimental career development

program. This program was conducted within the framework of a first term, freshman level English composition course normally referred to as English Composition I.

## Terms Related to Career and the Career Development Process

Career. Career is a purposeful life pattern undertaken by the individual actively interacting with the environment in the process of work. It is the totality of, and sequence of, occupations, jobs, and positions, paid and unpaid, held throughout a person's lifetime. These activities can involve home and family, education, occupations, community service, etc. (AEL, 1980). Individuals can develop a satisfying career through the process of clarifying needs, values and goals, and choosing and achieving their goals through work (AEL, 1980).

Career Decision Making. The psychological process and skill of organizing information, examining alternatives, and committing oneself to action (Harren, 1979).

Career Development. A lifelong process in which individuals develop strategies towards meeting personal and professional goals. These structures are developed through a continual process of examining and choosing among possible options on the basis of personal values, needs and goals and the dynamics of surrounding social and economic environments (Haney & Howland, 1978).

Career Exploration. The process whereby the individual makes use of knowledge about self to explore the work environment and ultimately gain increased understanding of both self and career (AEL, 1980).

Career Plan. The manner in which the individual accounts for the sequence, time and resources needed to reach a career goal (AEL, 1980).

Career Planning Process. Viewed in the present course/study as being comprised of the following steps: (1) self-assessment, (2) learning how to use a career information delivery system, (3) making connections between self-assessment and career information, (4) choosing among available options (decision making), and (5) translating personal and career goals into an educational plan of action (AEL, 1980).

Career Theme. The overriding principle that gives structure and meaning to work and the sequence of one's work experiences, including education and training. The principle is made up of a person's pattern of values. Career theme expresses one's purpose and serves as a guide for both interpreting present experiences and anticipating future experiences (AEL, 1980).

Sense of Agency. A sense that the individual is an active, intentional initiator of life events rather than a reactor or participator.

Terms Relating to the Perry Scheme - (See Appendix B)

## Limitations of the Study

1.   Random assignment to groups was not possible in this study because of college policy dictating full access to qualified students in any academic area. The three intact classes used in this study consisted of self-selected students.   Hence, the internal validity of the experiment may have been threatened. However, an attempt was made to assess the likelihood that the samples came from the same population. The three experimental groups were expected to be somewhat similar in characteristics in that they were typical freshman students signing up for typical first-term, freshman-level classes.   Demographic characteristics, such as age and college major, were similar for all groups. There were no prerequisite courses for either the two English classes or the mathematics class that might have limited access to a certain type of student. Moreover, a satisfactory score on placement tests was required for entrance into both academic areas.   This increased the likelihood that all three groups were somewhat similar in characteristics such as academic background.

Because certain students may have purposely selected the experimental class, it was possible they possessed characteristics, such as an interest in career development, that predisposed them to achieve higher mean scores on the

measure of the dependent variable. In this case, however, the selection process did not appear to unduly influence the dependent measure, nor threaten the equivalence assumption. Most students reported choosing WSACP for reasons not related to the nature of the experimental treatment. Of the 20 students in WSACP whose paired pretest and posttest scores were included in the data analysis, only five chose the class for reasons related to course objectives. The remainder chose the course either because of scheduling convenience (n = 8), not realizing it was a special English class (n = 5), or because they needed the extra GENL 100 (Orientation) credit (n = 2).

The equivalence of the groups was checked using analysis of variance (ANOVA) procedures that compared group pretest mean scores on the dependent variable measures. These analyses revealed no evidence against the equivalence assumption. Nevertheless, because assignment was not random it could not be assumed that the three groups were equivalent. If the groups initially differed in a characteristic related to the dependent variable, any differences ultimately found could have been attributed to the differing characteristic, rather than the treatment.

2. The major instrument used in this study was the Measure of Intellectual Development (MID). Two essays from the MID, Essays A and C, were used on a pre/posttest basis.

Essay A of the MID has a well researched alternative form. However, Essay C does not.

Using an alternative test form with a pre/posttest study design is desirable from a methodological perspective. The alternative posttest helps to mitigate a possible threat to internal validity that involves the testing instrument itself. That is, people normally score higher when taking most types of tests the second time regardless of any intervening circumstances. Although it is also possible that higher scores can result when using an alternative form of a previously administered test, it is less likely that this will occur.

A particular advantage of using the MID, then, was that Essay A had an alternative test form. A particular disadvantage was that Essay C did not. However, given the nature of the task and the intervening time frame involved (11 weeks), this should not have posed a major problem.

3. The sample for this study consisted of students drawn from one institution. The Community College used in this study is a large, multi-campus, suburban/metropolitan institution, in a largely affluent area. Community Colleges will differ somewhat in their environments. Consequently, the results of this investigation may be somewhat similar to results that would be found in colleges of similar environments, but not for those institutions that are dissimilar in characteristics.

## Organization of the Study

Chapter 1 contains the introduction, statement of the problem, the rationale for the study, the research question, the definition of terms, and the organization of the study.

Chapter 2 contains a review of the literature. This review focuses on the following areas: (a) an overview of career development activities in higher education including summaries of selected college-level career development programs; (b) cognitive components of career development: Perry's theory of intellectual development; (c) career development theory as it relates to the current study; (d) integration of career and cognitive development theories; and, (e) an outline of WSACP.

Chapter 3 presents the research methodology, a description of study participants, a discussion of the instrument used to measure the treatment variables, and procedures for collecting and analyzing the data.

Chapter 4 presents the results of the study.

Chapter 5 contains a summary and discussion of the research results and findings as well as recommendations for further research.

CHAPTER II


REVIEW OF LITERATURE


This study was based on the assumptions that an effective career development model would contain several components. First, the course would be developmentally oriented, and would focus on developmental competencies and inadequacies (Morrill & Forrest, 1970; Perry, 1970, 1981; Tiedeman, 1961, 1963). Second, the course would focus on cognitive maturation (Perry, 1970, 1981) through an emphasis on the writing process. Third, the course would be taught within the regular academic curriculum (freshman English), and thus would be taken for academic credit. And, fourth, the course would be collaboratively designed and taught by academic personnel (English faculty) and counseling personnel. This Chapter focuses on theories and research that provided the foundation for the development of "Writing for Self-Assessment and Career Planning" (WSACP).


## An Overview of Career Counseling
## in Higher Education Settings


Review of literature revealed that, generally, participation in college-level career development programs posi-

tively impacts student vocational maturity, career atti-
tudes, and level of decidedness towards career and academic
major (Brosnan, 1981; Devlin, 1974, Garrett, 1984; Green-
wood, 1983; and Healy, 1984). A previous review by Schenk
et al. (1979) depicted similar findings. Campbell et al.'s
review (1983) also substantiated the positive impact of such
programs on growth and adjustment in the five broad outcome
areas of: (a) improved school involvement and performance,
(b) personal and interpersonal work skills, (c) preparation
for careers, (d) career planning skills, and (e) career
awareness and exploration. The effects of many programs are
questionable, however, due to methodological problems such
as lack of control groups (i.e., Forrester, 1977; Kaufman,
1978), high attrition rates (i.e., Winquist, 1975), inade-
quate treatment time coupled with too many course objectives
(i.e., O'Neill, 1982).

Although generally impacting positively on career
development, the studies showed mixed results concerning the
effectiveness of specifically focused career decision making
treatments in helping students generalize a decision making
process or increase awareness of the developmental nature of
that process. It appears that treatments that provide a
specific and narrow focus do not seem to adequately elicit
refined problem-solving or decision making behaviors in
other situations.

If the career process is indeed viewed as a continual process and not a singular event, as it was in the current study, then this on-going, developmental aspect of the decision process takes on increasing importance. For treatment approaches to be most effective they need to emphasize a most critical component of development, cognitive structure (Perry, 1970). In the complete literature review of existing career development programs in higher education, no program was found that incorporated all of the four components, developmental, cognitive, collaborative and academic, discussed above.

## Career Development Approaches: A Brief Review

In 1974 Devlin found that career-related programs were on the increase in higher education settings. Approximately 10% of those colleges surveyed (1,521) offered courses in career development. An additional 15% planned future course offerings in career development and planning. Although very diverse in appearance, most of these career courses were developed as "connectors" between personal characteristics and the world of work (trait-factor approach).

Morrill and Forrest (1970) organized career development courses by theoretical and qualitative differences. They divided interventions into four broad "types". All involve the use of counselors. Type I approach matches client and career through a trait-factor approach. In Type II, the

counselor helps the client determine career alternatives. After teaching decision making skills, the individual is encouraged to make his or her own career decisions. In a Type III approach, the career decision making process is viewed as a series of choices made over time. The individual is seen as continually needing to update old choices. As does the Type II approach, Type III counseling emphasizes the teaching of decision making skills, but additionally stresses these skills as important throughout adult development. Type III differs from Type II in its emphasis on a lifelong developmental outlook towards decisions, rather than simply on the decision process itself.

Type IV counseling, the approach most coveted by Morrill and Forrest, and the approach used in the development of WSACP, focuses on the potential of the individual to become an active agent in the development of his or her career process. In this approach the counselor helps the client obtain an awareness of developmental competencies and inadequacies. Other developmental task work seen as appropriate in moving the client towards self-direction is also stressed. The development of individual responsibility (agency) becomes the preferred goal within the counseling process.

Types I, II, and III counseling approaches were viewed by Morrill and Forrest as efforts to help people adjust and accommodate to existing reality. Type IV stresses indivi-

dual responsibility and action through purposeful goal setting and the mediation of knowledge about occupational information. It includes helping clients develop general competency skills that are useful in the career process as well as in a larger context of personal development. Within the context of the Type IV approach to counseling, Morrill and Forrest suggested that the term career process is a more adequate descriptor or concept than is vocational choice.

Morrill and Forrest argued that while theoretical notions of career choice or process had broadened, practice in the field had not kept pace. "There has been little change in the actual practice of vocational counselors since Parson's original proposition that the characteristics of [person] and job should be matched" (Morrill & Forrest, 1970, p.304). Practices at that time primarily involved combinations of interest, aptitude, and personality testing, and the interfacing of these tests with occupational and educational information (Morrill & Forrest, 1970). The authors strongly recommended that more emphasis be devoted to "Type IV activities" that stress the notions of commitment, personal responsibility, and sense of "agency". This emphasis would necessitate broadening the notion of the counseling process to match the larger scope of human development, which was a major impetus in the development of WSACP. "Counseling for vocational development should parallel the developmental process; that is, the focus

should be narrow when only a point -- a specific decision-- in the development process is being considered and broad when the concern is the whole person in relation to his [or her] career process" (Morrill & Forrest, 1970, p.304).

Emphasizing continuous client growth, and tying it to the development of personal agency, commitment, and responsibility, moves counseling in a direction referred to as psychoeducational (O'Neill, 1982). The psychoeducational approach, similar in scope to Type IV, was advocated by a number of authors, including Krumboltz and Thoresen (1976), Tyler and Gatz (1977), and DeCharms (1976). In a review of the literature by Hyne (1973) and later by Remer and O'Neill (1980), very few systematic approaches to career development were found that could be labeled as psychoeducational or Type IV.

The present literature review revealed an increase in non-Type IV career development approaches. Although many of these programs seemed effective within the scope of their particular frameworks, they may have lacked one or another Type IV characteristic, such as developmental orientation. Programs reviewed under this category included Buchanan, 1978; Davis, 1984; Garrett, 1984; Gelatt, 1962; Greenwood, 1983; Rodriquez, 1986; and Winquist, 1975.

It became evident, despite Morrill and Forrest's exhortations, that Type IV approaches to student career development are still very much in the minority in the

professional literature. Only a few programs were found which could be considered Type IV. These are briefly outlined below.

A published life-planning training program entitled "Self Empowerment" was conducted by Forrester (1977) to teach effective life-planning and goal-pursuing behaviors at the University of Oregon. An additional course goal was the shifting of students' locus of control from external to internal. The Self-Empowerment program was designed on the proposition that the dimensions of awareness, purpose, career concepts, skills, and information could be taught, and that with heightened skills in these areas a student would assume more self-responsibility in his or her negotiations with the environment. The program was delivered in a 15 hour format, divided into four sessions. Three instruments were used on a pretest, posttest basis to measure change - Rotter's Internal-External Scale, Crumbaugh and Maholick's Purpose-In-Life Test, and a posttest structured interview. No significant changes were found in Purpose-In-Life scores. Positive significant differences in pre-posttest scores were indicated by Rotter's Internal-External Scale. The posttest structured interview revealed a majority of students found the seminar to be helpful.

The "Self-Empowerment" course is considered to be a Type IV approach because of its emphasis on a broad range of life development skills and its focus on individuals becom-

ing more actively responsible for their goal-pursuing behaviors.

O'Neill (1982) focused on seven aspects of the career decision making process in his experimental treatment approach with volunteer college freshmen at the University of Kentucky. These seven aspects were: (a) facilitating an increased certainty regarding educational major and career choice, (b) encouraging a more systematic and deliberate decision making style, (c) increasing career information seeking behaviors, (d) increasing internal locus of control, (e) enhancing self-esteem, (f) facilitating attributes of psychosocial competence and, (g) encouraging participants to choose change agent strategies in response to barriers to career goals. These types of developmental course objectives place O'Neill's (1982) career model into the Type IV category of programs.

Course evaluation suggested that this program was effective in helping participants increase their level of certainty about college major and career choice. The remaining "developmental" variables, locus of control, self-esteem, psychosocial competence, etc., were not positively impacted by this program. This lack of effectiveness was thought by the author to be a function of inadequate treatment time coupled with attempting to achieve too many objectives.

Moore (1985) outlined a one-credit career course offered at the University of Maryland. Like the present study, this course was cognitive and developmentally oriented, offered for college credit, and based on Perry's (1970) model of intellectual and ethical growth. The Measure of Intellectual Development (MID), which assesses intellectual development along the Perry scheme, was used to investigate treatment effects. Pretest/posttest comparison of participating students revealed that over 40% showed increases in cognitive complexity beyond normal maturational development.

The final Type IV approach reviewed in this section was developed by Appalachia Educational Laboratory (AEL). It was entitled Career Planning and Decision Making [CPDM] (1980). CPDM was designed to be offered at the freshman or sophomore level as a comprehensive 2 semester hour course. The course comprises the following student learning objectives within the scope of six teaching units:

Unit I introduces the concept of career, career theme, and decision making, and examines decision styles and strategies. Unit II concentrates on exploring self (values, interests, aptitudes) and world of work (work activities, work situations, other worker traits). Unit III helps students clarify short term, intermediate, and long term goals. Within this effort, the concept of career theme helps students structure and project values into the future to formulate and establish career goals. Unit IV delves

into the career planning process in order to help students establish tentative career plans. Unit V examines the decision process and the concept of commitment with respect to academic major. This unit provides an opportunity for students to act upon career plans. Unit VI helps students view planning and deciding as continuous processes to help them manage the variables involved in planning and controlling their careers.

CPDM was pilot tested by AEL at three sites: a two-year community college, a four year liberal arts college, and a state university. Additionally it was field-tested at several sites during the 78-79 academic year, and subsequently re-modified. At least two separate studies have positively evaluated the efficacy of the CPDM program: Williamson (1979), and Cooke (1982). The CPDM program, as a Type IV approach, was chosen to provide WSACP with an instructional framework. Additionally, the community college-based field testing gave this program added credence. Theoretical linkages between WSACP and CPDM are described in a later section.

In summary, WSACP, as a Type IV developmental intervention, shared many goals similar to those found in CPDM and other reviewed Type IV programs, such as impacting general, as well as career development, and facilitating a sense of agency, personal responsibility, and commitment in the mediation of the career process.

Collaborative/Interdisciplinary Career Development Programs

A review of the literature found very few career development programs that could be classified as "collaborative". Collaborative programs were defined as those that combined the expertise of Student Development (counseling) personnel and teaching faculty within an academic-credit setting. The few programs that did utilize a collaborative approach (Adicks, 1973; Bailey, 1979; Gebhardt, 1979; Kaufman, 1978; Koring, 1984; Ward & Hillis, 1981) combined professional expertise within instructional units designed to impact separately on academic and career development.

Tougaloo College, for example, offered an interdisciplinary career-oriented Humanities major. This program provided separate components for assisting the development of career interests within the context of humanistic inquiry (Bailey, 1979).

A similar approach that interfaced academics (social sciences) and career development was developed at Housatonic Community College (Ward & Hillis, 1981). This program was designed as an intense, single course, "collaborative" experience. However, it was organized and administered primarily by Student Services personnel. Integration with academics was accomplished by the presentation of separate components designed to overlap the prescribed areas of career and social science. The course was designed to: (a) help students assess strengths, weaknesses, and motiva-

tions for attending college, (b) introduce the social sciences and the study of self vis-a-vis society, and, (c) assist students in the formulation of career plans. The career planning component was delivered by a counselor primarily through the testing (Strong-Campbell Interest Inventory) and discussion of vocational interests. The social sciences were introduced and examined separately through a guest speaker format. No formal course evaluation was attempted.

Kaufman (1978) designed an approach that attempted to integrate career development within a freshman psychology course at Wayne County Community College in Detroit, Michigan. Kaufman utilized Walz and Benjamin's (1975) "Life Career Development System" for this purpose. The focus of the study was to see if such an endeavor could affect goal-setting skills. Three pretest - posttest measures were employed: (a) case studies: student answers to questions on two case studies indicating ability to perceive effective goal achieving behaviors, (b) student ability to identify the dimensions of specificity, achieve-ability, measurability, and meaningfulness of goals on a ten statement instrument called "Goals or Non-Goals", and, (c) student scores on "Analysis of Goals", an instrument designed to measure student mastery of skills and concepts presented in the course. Significant differences in student mean scores on posttests were detected by all instruments. An additional

posttest, requiring students to analyze a selected personal goal, found all students able to complete the assignment in a satisfactory manner. A major study weakness was the lack of control groups.

Collaborative/interdisciplinary approaches within the freshman English curriculum. Very few interdisciplinary or collaborative approaches were found in the literature search (Adicks, 1973; Gebhardt, 1979; Koring, 1984) that interfaced the freshman English curriculum with career development objectives, as does the present study. Those that did contain this component all differed substantially from WSACP in terms of course objectives and interfacing mechanisms. For example, Adicks (1973), developed a program utilizing both an English instructor and a counselor. The English instructor was primarily responsible for integrating acade- mic and career development objectives with assistance from college placement personnel. No true collaborative effort existed.

Gebhardt (1979) reviewed an instructional program designed to integrate career education with English instruc- tion at the college level. The career component focused primarily on a review of career alternatives for college English majors. An additional emphasis was the relating of the liberal arts values of the English field to the prag- matic values of vocational education.

Another interdisciplinary approach that used the freshman English curriculum in an attempt to impact on career development issues was reviewed by Koring (1984). The thrust of this effort, however, concentrated primarily on the integration of job-seeking skills with Freshman composition and rhetoric instruction.

In summary, the career development programs reviewed in this section manifested a variety of forms. No Type IV-developmental approach was discovered that focused on increasing cognitive complexity; was provided for academic credit; or was collaboratively designed and taught by professionals from both academic (freshman English) and counseling disciplines. The remainder of the Chapter focuses on theoretical underpinnings and course content of WSACP, developed for the purpose of this study.

## Writing for Self Assessment and Career Planning (WSACP)

The experimental treatment WSACP provided a structured learning environment consisting of the following characteristics:

1. WSACP was offered as a freshman level, first quarter class. It was integrated with the traditional English curriculum and offered on a credit basis. Students received the normal 3 credits for English Composition I as

well as one required credit for "Freshman Orientation",
normally taught as a separate class by Student Development
personnel. Both classes were required freshman courses.

2. WSACP was offered as an interdisciplinary course
involving both English and Student Development faculty. The
course was collaboratively designed and taught by a member
of the English faculty and this researcher, a member of the
Student Development/Counseling Center staff.

3. WSACP was tied to both (a) the self-assessment
domain of the career decision making process, and
(b) cognitive development levels:

A. WSACP was based on Tiedeman's (1961, 1963)
conceptualization of the career process, and an adaptation
of Appalachia Educational Laboratory's (AEL, 1980) "Career
Planning and Decision Making" (CPDM) course for college
students. CPDM also relied heavily on Tiedeman's career
development theory.

B. Level of cognitive development (complexity), as
identified by Perry (1970), was viewed in this course as a
critical component of career development. Career develop-
ment/self-assessment activities were structured to facili-
tate cognitive development along the Perry scheme. WSACP,
therefore, was considered to be a "developmental" interven-
tion, stressing writing and other activities designed to
facilitate cognitive growth processes seen as essential by

Perry in developing mature choice and commitment. Course activities also incorporated the critical developmental notions proposed by Sanford (1966) of "challenge" (to the next level) and "support" (developmental growth typically involves personal redefinition, thus posing a potential threat to the "self"). (See Appendix D for course outline, and Appendix G for combined [English/Career development] course syllabus).

The primary focus of WSACP was the development of students' overall (general) cognitive structure along Perry's (1970, 1981) conceptualization of the intellectual growth process. The ultimate intent of this focus was the facilitation of student development within the specific "conceptual domain" of career. Such an approach implied that a learning environment be created that was somewhat "dualistic"; that is, able to keep both of these learning perspectives in simultaneous focus. The genesis of this approach emanated from the following theoretical and re-search perspectives:

Harvey, Hunt, and Schroder (1961) suggested that different conceptual systems/domains can vary in development from one content area to another. More recent research by Heath (1978) and Rest (1979) substantiated the notion that an individual can reason from somewhat different cognitive perspectives in different areas of life. Keeping these

perspectives in mind, Sheese and Radovanovic (1984) also argued that one implication of a stage development model such as Perry's is that when advancement in cognitive structure or level of thinking is advanced in one environment there is a positive effect on the general process, which, in turn, affects other conceptual areas.

From these theoretical and research perspectives it seemed logical to hypothesize that by focusing on the cognitive development of a specific content area such as career, one would be able to positively impact both the narrow domain of career and the overall development of cognitive structure. Additionally, development in both areas could potentially add a synergistic dimension to the learning environment, further "fueling" student growth in sought-after directions.

In developing an educational intervention to impact the cognitive components of the career development process, a specific theory of career development (Tiedeman) and an instructional approach (CPDM) related to that theoretical perspective were used. It seemed appropriate to utilize a career framework with theoretical linkage to Perry's conception of cognitive development.

Both Perry and Tiedeman offered conceptualizations of human growth and behavior based upon a developmental framework. Both authors view human growth and behavior as

functions of life cycle stages and the "developmental" tasks inherent in the make-up of each stage. Because of this "developmental" linkage, Tiedeman's paradigm was chosen to provide WSACP with an overall career theory guideline.

It also seemed appropriate to link WSACP's instructional approach to Tiedeman's career development perspective. Accordingly, a major guiding force in the design of WSACP was a career program for college students developed by the Appalachia Educational Laboratory [AEL] (1980), entitled Career Planning and Decision-Making (CPDM). CPDM, outlined previously, is a Type IV, designed-for-credit approach. It was chosen as an instructional framework for WSACP primarily because of CPDM's theoretical linkage with Tiedeman's career development paradigm. Both WSACP and CPDM share a similar focus: the understanding of self in relation to choice and commitment. Many of the activities in WSACP had their genesis in CPDM, with adjustments and elaborations made to provide a working "fit" within the writing/curricular approach that was used in the current study. A more detailed description of Perry's scheme of cognitive complexity, of Tiedeman's career development model, and the integration of these two paradigms in the development of WSACP follow. Additional theoretical foundations for WSACP course goals and course components are also provided.

Cognitive Development Theory As It Relates to the

Current Study: The Perry Scheme of Intellectual and

Ethical Development

According to Perry (1970), cognitive development proceeds through nine positions and can be organized along four major, and sometimes overlapping dimensions: Dualism (Positions 1 and 2), Multiplicity (Positions 3 and 4), Contextual Relativism (Positions 5,6,7), and Commitment within Relativism (Positions 7,8,9). Cognitive growth can be deflected from this developmental pathway via Retreat, Escape, and Temporizing. Appendix A outlines these nine Perry "positions". This outline reviews cognitive perspectives by stage on: (a) the students' general view of knowledge and learning and, (b) the students' view of the career process. The intellectual "tasks" of each stage, as well as transitional points between positions, are also noted. Appendix B reviews definitions related to the Perry scheme.

Perry's nine cognitive positions represent distinct "structures" of thought, with each position providing the individual with a different perspective from which to view knowledge, learning, and "truth". The path of development is from an absolute view of knowledge and truth to a more relativistic outlook.

This developmental scheme provides a model of how students give meaning to educational experience. Each new position represents a challenge to the student's current

view of the world (Perry, 1981). Each step along the continuum includes and transcends earlier steps or structures, defining movement through these stages as developmental as opposed to mere phases of life (Perry, 1981). Thus, as one proceeds through the various positions, there are continual challenges and issues of personal identity to face and resolve.

The first three Perry positions represent a simple right-wrong cognitive structure and the students' adjustment to a diverse and relative world. Within these initial structures the individual is involved in a progressive modification of an absolute, right-wrong/black-white outlook to make room for the simple pluralism called "Multiplicity" (Perry, 1970). The primary intellectual tasks of positions 1 and 2 are learning facts, information, definitions, and simple concepts (Moore, 1985). As movement progresses toward position 3, students become increasingly aware of quantity and process. They begin to see multiples (i.e., more than one perspective, opinion, theory), and can distinguish between content and process. "They are also beginning to compare and contrast tasks with some sophistication" (Moore, 1985, p.4).

In terms of the career process in these initial stages there is generally a perception that only one right career exists. The individual will normally rely on external

authoritative influences, such as parents, friends, coun-
selors, and career tests, to define "it"; to "tell" him or
her what that right career is (Sheese & Radovanovic, 1984).

In the middle three positions (positions 4, 5, and 6)
growth is towards a generalized relativistic structure, as
the necessity of personal commitment in a relativistic world
is foreseen (Perry, 1970). Within these positions the issue
of personal identity is faced as that identity is defined
and re-defined by the manner in which personal commitment in
a relative world is approached and attained. Within the
struggle for identity during the three middle stages of
cognitive growth, the simple pluralism of Multiplicity is
transformed into what Perry refers to as "Contextual Rela-
tivism".

The major developmental task within Perry positions 4,
5, and 6, involves overcoming the instability of self in a
diffuse, relativistic world. Starting at position 4,
students are becoming intellectually aware of the role of
supportive evidence in critical thinking and judgement
(Moore, 1985). As a result, qualitative analysis becomes
easier (Moore, 1985).

> "At this point students can provide critiques with
> both positive and negative elements and some
> elaboration; they are able to apply more effec-
> tively in-class learning to other classes or

their own lives.   In Contextual Relativism stu-
dents   are   more   comfortable   with   complexity and
interrelationships in learning   tasks.   They can
not   only   do   analytic   tasks but are comfortable
with synthesis as well, and can evaluate arguments
is qualitative terms."   (Moore, 1985, p.4)

In   terms   of   career   process,   the   individual in these
stages experiences changes as a result of the   shift towards
a generalized relativistic structure.   Conceptually, it is
now possible for the person to start envisioning the legiti-
macy   of   a   range   of   career choices and approaches to the
decision   making   process   (Sheese   &   Radovanovic,   1984).

Positions 7,   8,   and   9,   the   final stages in the Perry
scheme of   intellectual   growth,   trace   the   development of
commitment in   the   individual   who has   finally accepted and
begun integrating the notion   that a   person's "knowing" and
"valuing"   are   relative   in   time   and   circumstance.   As a
result of this   developmental   change   in   the   structure of
thinking,   it   now   becomes   possible   for the individual to
realize that he/she   is   faced   with   the   responsibility of
choice (Perry,   1970).   The major developmental task within
these last three stages is the   acceptance of   the responsi-
bility of commitment (Perry, 1970).

In the process of career development these final stages
of cognitive growth also have their impact.   The individual

moves toward a completion of the fusion of career identity and self-concept. In this process "the individual's values, thoughts, and behaviors become more closely consistent with one another" (Knefelkamp & Slepitza, 1976, p.56). As a result of developmental changes in the structure of thought, the individual is able to remain open to new ideas and challenges at the same time that career and self-concept fusion is occurring (Sheese & Radovanovic, 1984).

In terms of promoting student cognitive-maturational development along the Perry scheme, WSACP relied heavily on a developmental-change paradigm developed by Knefelkamp and Slepitza (1976). These researchers identified nine areas of qualitative behavioral change that make up the developmental sequence within the career process. These areas of behavioral change provided WSACP with a conceptualization of developmental career movement within the context of the Perry scheme of intellectual growth. In identifying these developmental changes, Knefelkamp and Slepitza relied heavily on theoretical contributions from Perry, as well as empirical support from Rest (1979), Kohlberg (1969), Harvey et al. (1961), and Loevinger (1976). These qualitative changes that signify developmental movement provided WSACP with a focus for course content, writing assignments, essay evaluations, and classroom discussion. They also provided an indication of areas where students might need added

support. These qualitative changes outlined by Knefelkamp and Slepitza (1976) are briefly reviewed below.

1. Locus of Control - the source of self definition which emanates either from within the individual or from outside environmental influences. The progression of development is normally from external (i.e., parental pressures, job market pressures, test results) to internal sources of control, where information is processed predominantly through internal reference points.

2. Analysis - the process of breaking down a concept or subject into its component parts. As analytic ability increases, one is better able to see cause and effect relationships.

3. Synthesis - the ability to integrate component parts of a subject into an intricate whole. More complex than analysis, this factor does not appear until later stages of cognitive growth (stages 6 and 7). However, students at lower stages may tentatively use "synthesis" from time to time, and these attempts can be noted and gently encouraged.

4. Semantic Structure - the nature of the verbs and qualifiers used in written and oral expression. The progression is from a rigid, absolute structure to a more open semantic structure characterized by greater use of alternatives, qualifiers, and modifiers.

5. Self-Processing - similar to analysis in its emergence and development, self-processing is the ability and willingness to examine and define oneself.

6. Openness to Alternative Perspectives - recognizing that other perspectives are legitimate, even if one differs with a particular point of view.

7. Ability to Assume Responsibility - the degree of willingness to accept the consequences of one's behavior, regardless of interfering circumstances.

8. Ability to Take On New Roles - the ability to expand one's behavioral repertoire in the face of new role or activity demands. The progression initially moves from a position of not seeking role opportunities, towards expansion of old roles. The progression culminates in a gradual searching for situations that allow the individual to take on new and different roles with increasing confidence.

9. Ability to Take Risks with Self - this factor is closely related to role-taking ability and refers to an increasing ability to risk self esteem in new situations and contexts. The focus is on experience and learning, rather than ego-defense or self consciousness.

Career Development Theory as it Relates to the Current Study: Tiedeman's Theory of Career Development

As has been stated, WSACP was linked to a life cycle perspective of career growth developed by Tiedeman (1961),

and Tiedeman and O'Hara (1963). The following conceptualiz-
ations, culled from Tiedeman's career paradigm, provided
WSACP with a career development foundation:

Primary mechanisms involved in career development are
the notions of differentiation (distinguishing a part from
the whole) and integration (closure, or a balancing of the
parts). Differentiation allows for the understanding of
experience and a more discriminating condition of thought,
feeling, and action [decision-making] (Tiedeman & O'Hara,
1963).

The mechanism of differentiation is present in many
human processes, such as visualization and cognition.
Within the realm of cognition, as the human organism grows
and achieves greater intellectual complexity, the process of
differentiation allows a constant modification of ideas the
individual holds concerning existence (similar to Perry's
notions of growth in cognitive structure). The impetus for
differentiation comes from both internal (i.e., physiologi-
cal or psychological) and external (i.e., family or school)
sources. According to Tiedeman and O'Hara (1963), one of
the purposes of education is to facilitate the differentia-
tion process in such realms as ideas, feelings, and problem
solving.

Distinctions created by differentiation are only
potentially useful to the individual until integration or
closure occurs. Thus, these two processes are interdepen-

dent. Closure can only occur when there is a properly balanced integration of differentiated parts. If this balancing of parts does not occur, further differentiation will generally result.

The interrelated processes of differentiation and integration can be triggered by the individual experiencing a problem, such as the consideration of career direction. As a problem is initially experienced there is normally an awareness of discomfort and a concomitant need for resolution through the decision process (Tiedeman & O'Hara, 1963). This "problem" of decision contains two phases or "aspects", Anticipation and Implementation. These phases represent distinct changes in the psychological condition of the person as he/she resolves a problem of personal importance (Tiedeman & O'Hara, 1963).

WSACP focused primarily on Tiedeman's initial Anticipation phase. During this phase the individual attempts to suitably frame the problem as he or she progresses through four major steps:

1. Exploration. Within this step, the individual becomes aware of the existence or imminence of a problem and the necessity of resolution through the decision process. A number of alternatives or possible goals are initially differentiated and then considered. The alternatives available to individual awareness are affected by: (a) the individual's prior experience, (b) the degree of the indivi-

dual's investment in the continuation or modification of his/her existing state and the situation in which the problem is to be resolved, and (c) the help the individual may seek or receive in attacking the problem (Tiedeman & O'Hara, 1963).

The context for choice is provided by the individual's psychological "field" -- the concepts or premises one has about the self in a given situation, and the person's attitude toward the concept (Tiedeman & O'Hara, 1963). "In the exploration phase, these "fields" are normally produced via fantasy/imagination and, with encouragement, can provide fairly accurate specifications of the needed premises and the effect the presumably needed premises may have upon him [or her]" (Tiedeman & O'Hara, 1963, p.39)

During the subsequent steps of the Anticipation phase, Crystallization, Choice, and Clarification, the self becomes tentatively committed to a solution of the "problem".

2. Crystallization. Crystallization normally represents a stabilization of thought as the individual readies the self to move in a specific decisional direction. From the initial comparison of alternatives, distinctions begin to emerge. The "cost" and "return" of each alternative is assessed in relation to the individual's values. Within this decisional context the reconsideration of former value positions takes place; this revaluation process can provide a basis for possible new directions. However, these new

thoughts/values may also prove too unsettling and may be dismissed. As a result, a particular "crystallization" is never irreversible, but may give rise to re-explorations and re-crystallizations.

3. Ch_o_i_ce. Choice, a decision to commit to a particular goal, usually follows soon after crystallization occurs. The goal can be elected with varying certainty, dependent upon the degree of clarity and complexity involved in the initial crystallization, and the freedom available to the individual to pursue the goal.

4. Cla_r_ification. The Anticipation phase concludes with the step of clarification, where choices are analyzed. During this analysis, doubt is usually experienced, causing the individual to work towards further clarification. This doubting/clarification process can lead to commitment or a return to earlier stages of the decision model.

The second phase of Tiedeman and O'Hara's (1963) model, Implementation, involves putting tentative career plans into effect. Implementation is the process of interaction between the individual's choice and the social environment; it is where imagination meets reality (Tiedeman & O'Hara, 1963). The individual somewhat defensively commits to a solution during Induction, the first step of Implementation. During the second step, the process of Reformation, the individual relatively abandons the self to the chosen solution. In the last step of Integration, the individual

attains a certain objectivity about self and group (occupa-
tional environment) purpose.

Extensive research (O'Hara & Tiedeman, 1959; Harren,
1966) has been conducted on this theoretical paradigm and
appears to support the following hypotheses:

1. The interdependent processes of differentiation and
integration are identifiable by stages.

2. Individuals are always in at least one of the seven
steps of Anticipation or Implementation in regards to their
career development.

3. The process described by Tiedeman is, for the most
part, progressive; however regression is known to occur.

4. Individuals can be at different stages on different
problems.

5. Increase in age is positively correlated with
changes in vocational self concept.

6. Clarification of self concept and personal values
occurs with an increase in self-knowledge.


Integrating Tiedeman's and Perry's Theoretical Perspectives
in WSACP

According to Tiedeman, primary mechanisms involved in
career development are the notions of differentiation
(distinguishing a part from the whole), and integration
(closure, or a balancing of the parts). These "mechanisms"
are present in all phases of Tiedeman's paradigm, and are

critically involved in the individual attaining rational solutions to life and career problems. During the first two steps of Exploration and Crystallization, which WSACP concentrates on, students are primarily involved in the differentiation component of the differentiation/integration process. That is, students are in initial stages of problem awareness, where differentiation is "triggered" as alternatives are brought into awareness.

As the individual achieves greater intellectual maturity the differentiation process is experienced somewhat differently through a constant modification of ideas and a changing relationship of the individual to his/her inner and outer world (Tiedeman & O'Hara, 1963). Perry's (1970, 1981) cognitive growth model essentially explains how this constant modification of ideas takes place by delineating and mapping the process of intellectual growth through the nine positions of the Perry scheme. That is, while Tiedeman generally notes that the impetus and evolution of differentiation emanates from the maturation of "physiological or psychological sources", Perry specifically explicates the mechanisms, structures, and development of a most critical "source", the cognitive maturation process.

For Tiedeman, the alternatives considered during "differentiation" define the initial or preliminary limits of consideration of the problem (Tiedeman & O'Hara, 1963). Perry's model explains in more depth that these "limits of

consideration" are closely tied to individual development in structure of thought. Where Tiedeman suggests that the individual can make better choices from an expansion of the original "limits" through "maturation", Perry details the unfolding and development of the maturation process.

Basically, Perry presents a more complex extrapolation of Tiedeman's differentiation/integration process. Although Tiedeman and Perry both might view "differentiation" as being modified through intellectual maturation, Perry also views cognitive growth as being modified or stimulated by the differentiation process. For example, Perry would consider it essential, for any worthwhile comparison of alternatives, that the individual at least be able to acknowledge the legitimacy of different perspectives and opinions, as in Perry positions 3 and 4 (Multiplicity). The development of this level of cognitive structure, according to Perry, requires that the individual go through a series of gradual (and probably unconscious) intellectual accommodations; these accommodations are essentially stimulated through a differentiation process. This differentiation, or gradual accommodation process, might proceed as outlined in Figure 2.1.

Although Tiedeman states that "good decisions" primarily involve the ability to rationally distinguish between alternatives, both he (see Clarification) and Perry (see Multiplicity) believe that choice with commitment often goes

From "Forms of Intellectual and Ethical Development in the
College Years" by W. Perry, 1970, New York:  Holt, Rinehart
and Winston, p. 28.  Adapted by permission.

Authorities (teachers) know the truth.

|
|
▼

Some Authorities seem to disagree about the
truth.
    |       Leads to      |
    |                   |
    ▼                  ▼

Differentiation between Authorities (teachers) that
teach the truth and Authorities that don't teach the
truth.
    |   Leads to
    |
    ▼

Differentiation between true Authorities and fraudu-
lent Authorities.
    |   Leads to
    |
    ▼

Differentiation between Absolute Truth and Authori-
ties.

    |   Leads to
    |
    ▼

Differentiating (questioning) whether any Authority
really knows.
    |   Leads to
    |
    ▼

Eventually foreseeing the potential legitimacy of
"otherness".

------------------------------------------------

*Figure 2.1.*  *Modification of cognitive structure*
    *through the differentiation process*

beyond a rational understanding, or the ability to see, different perspectives and opinions. As Tiedeman suggests, development often requires commitment with tentativeness (Tiedeman & Dudly, 1967). For example, Tiedeman states that, after an initial decision, doubt is usually experienced. This stimulates the individual to work towards further clarification. The doubting/clarification process can lead to commitment or a return to earlier stages of the decision model (Tiedeman & O'Hara, 1963).

Both Perry and Tiedeman align committed choice with the individual's ability to experience something akin to "faith"; commitment, then, is seen as a reaffirmation of choice subsequent to, and dependent upon, a "doubting" component. Interestingly, it is Perry's cognitive paradigm that provides a more precise and detailed road-map of this part of the developmental journey, suggesting how mature (committed) choice often goes beyond a level that can be achieved by mere rationality. For Perry, commitment to choice can only be experienced when one transcends rationality and is able to foresee the necessity of "faith" (in oneself and one's choices) in a world where truth is relative, and a number of "good" choices can always rationally be made.

Perry details this pathway to commitment and faith by tying Tiedeman's doubting/clarification process closely to development in cognitive structure. As the individual

matures cognitively in Perry's Contextual Relativism posi-
tions (5,6,7), he or she experiences the capacity for "meta-
thinking" (the ability to think about one's thoughts), and
the importance of personal responsibility in a world now
viewed as being devoid of absolute truths. The ability to
critically think and concomitantly see oneself as alone and
self-responsible in an uncertain world allows one to foresee
the necessity of having faith in, and being committed to,
one's own choices. In fact, Perry views the commitment
process as a way that one re-orients the self in this newly
discovered world of complexity and uncertainty. Within this
commitment process, then, there is a redefining of the self
in relation to a forever changed world (Perry, 1970). For
Perry this "orientation through commitment" is only possible
within the more complex structures of cognitive development,
initiating in Contextual Relativism (positions 5,6,7) and
growing and solidifying in Commitment within Relativism
(positions 7,8,9). Other authors have pointed out the
central nature of commitment, its relationship to cognitive
development, and its importance in the design of career
facilitation strategies. Brabeck and Welfel (1985),
Broughton (1978), Edelstein and Noam (1982), Fischer (1980),
Kitchner and King (1981), Labouvie-Vief (1982), and Moshman
and Timmons (1982), have all argued that the development of
self-determined behavior, or sense of agency, which under-
lies the capacity for commitment, can best be understood as

being consistent with a student's level of intellectual development. Segal (1967) referred to this process as the development of "independent thinking", which he felt was critical in the emergence of commitment.

In summary, Perry's model of cognitive growth explicates and extends Tiedeman's career development paradigm, providing a structure for understanding how the modification or evolvement of cognitive structure is intricately involved in the process of career development. In the decision making process, for Perry, it is the growth of cognitive structure that best explains how one experiences personal conviction of belief, thereby setting the stage for career "problem" resolution, or as Tiedeman would conceptualize it, "Integration".

In concluding this section synthesizing the cognitive and career development processes, some comments concerning the nature of developmental instruction seemed appropriate. In the effort to challenge students to "open" to the cognitive and psychological growth processes essential to the development of commitment and mature choice, some risks to students were recognized. Each new step or position of cognitive growth, as represented by the Perry scheme and the Knefelkamp and Slepitza (1976) description of the developmental sequence, represents a redefinition of self. This re-defining process contains a dimension of threat to identity along each step of the growth process (Perry,

1970). In addition to learning, the learning environment itself can pose threats to identity, since performance and evaluation are inevitably linked to self-concept (AEL, 1980). Because of these potential threats to identity and learning, and to facilitate the acceptance of developmental challenges, "support" was viewed as an essential component of WSACP.

Sanford (1966) posited that developmental movement takes place to the extent that a learning environment provides a balance between challenging a student to think and act with more qualitative complexity, and supporting the student as he/she prepares to take the ego-threatening risks associated with the challenge. Kohlberg's (1969) notion of "plus-one staging" provided an additional "support" guideline. Kohlberg postulated that students may very likely be over-challenged and under-supported, and thus likely fail, if concepts are presented in ways that require reasoning two levels above them in complexity.

In light of these guidelines, care was taken in WSACP to specifically support students' established levels of cognitive functioning while simultaneously challenging them towards more complex levels of intellectual functioning.

## Other Theoretical Paradigms Used in the
## Development of WSACP

Other descriptive-theoretical paradigms provided additional guidance in the design of WSACP. The Myers-Briggs

Typology model addressed issues of learning style and facets of self-assessment that related to finding congruence between career environment and temperament type. Myers-Briggs theory and "temperament types" were also used to provide small-group homogeneity viewed as important in the development of the collaborative (group) Fantasy Essays, a major course activity in WSACP. (Refer to Course Outline, Appendix D; theoretical underpinnings of these essays are presented in Appendix F).

The ideas of Holland (1966, 1973) were also incorporated into the course design to further the breadth of self-assessment activities and impact the outcome of self-assessment in meaningful ways. (For a further discussion of WSACP as a self-assessment intervention, refer to the following section). For this course, outcome in self-assessment was centered around the concept of finding congruence between career environment and individual characteristics. One aspect of this congruence, as previously mentioned, involved the use of the Myers-Briggs Temperament Inventory (MBTI) in finding relationships between values and needs ascribed to the different temperament types, and selecting (or at least becoming aware of) environments supportive of those values and needs. Holland's theoretical model helped further the notion of "congruence" through the introduction of his six personality and career environments (Realistic, Investigative, Artistic, Social, Enterprising,

and Conventional) and the interests, skills, and needs associated with each. According to Holland, people in environments congruent with their personality type will likely be more productive and satisfied with their career experience.

## WSACP as a Self Assessment Intervention: Additional Elements of Course Development

WSACP primarily involved the self-assessment domain of the career planning process. Assessment relates to identifying those factors in the individual considered important in the process of making career decisions. "Assessment" was viewed in this course as only a means to an end. It was introduced as a starting point, not an ending point, in the career planning process. Subsequent steps (discussed, but not emphasized in this course) would include: (a) learning how to use a career information delivery system, (b) making connections between self assessment and career information, (c) tentative decision making, and (d) translating personal and career goals into an educational plan of action (AEL, 1980). The "steps" of decision making are actually an on-going, cumulative process, superimposed on the "whole" of the career planning process (AEL, 1980). Decisions are seen to change and evolve as a function of relatively slow cognitive changes towards a more complex structure. Mature choice and commitment are seen as possible only in the more

advanced stages of the Perry scheme, a development that is thought to take place in the later college years (Perry, 1970). This theoretical perspective of advanced development in the later college years provided the basis for concentrating primarily on self-assessment and not attempting to include the sum total of the career planning process. The limited time-frame of this course (11 weeks) also precluded a more comprehensive effort.

The following self-assessment areas, and their relationship to career choice, were emphasized in WSACP:

Values. What is important to the individual and the degree to which it is important. Values are activities or ideas, directly related to interests, that represent the central core-being of the person and reflect the uniqueness of each individual. The more values are related to work the more likely an individual's needs will be met, and satisfaction attained (AEL, 1980).

Needs. Basic needs, such as food, and psychological needs, such as prestige. Needs represent a person's values and are the basis for his or her goals (AEL, 1980).

Goals. Descriptions of what a person intends to accomplish and become. Goals are the futuristic projection of a person's values (AEL, 1980).

Interests. The interest domain is related to attitude and motivation. Having interest in something plays a

significant part in successful completion of an activity,
whether it be school achievement or a job task (AEL, 1980).

Attitudes. Feelings associated with the "premises" one
holds about one's existence that give rise to the under-
standing of experience. An understanding of the "attitudes"
one holds allows one to distinguish between different ideas
or experiences. This allows for a more differentiated
condition of thought, feeling, decision, and action (Tiede-
man & O'Hara, 1963).

Aptitudes/Abilities. Besides obvious connections with
decision making, aptitudes can predict potential learning
difficulties. Strong interests can help overcome potential
learning difficulties (AEL, 1980).

Achievement. Assessment in the achievement area
involves evaluation of progress in a subject area. School
subjects are indirectly related to career fields. For many
students, interests are developed through subject matter
experiences. Achievement can be directly related to suc-
cessful learning in advanced courses as part of job
knowledge and skill development.

Course goals in relation to self-assessment. In
attempting to impact the self-assessment domain of the
career planning process, the following goals emerged to help
shape the structure of WSACP. These course goals have been
abstracted from AEL's CPDM (1980):

1. To help students develop an awareness and understanding of the basic concepts involved in assessment and the use of assessment results. Helping students conceptualize the purposes of assessment can provide for more positive student attitudes in that process.

2. To provide students with a process as well as a concrete structure that could be utilized in the organization of information about the self, both in the context of the present course and for subsequent career exploration (AEL, 1980). Some emphasis was placed on connecting assessment information to 12 general career areas and 66 worker-trait groups described by the Department of Labor (DOL). An in-depth attempt to connect assessment to more "final" career decisions was not be stressed for reasons described earlier. However, that process was outlined in general in order for students to have some conceptualization of parts-to-whole as it related to career decision making.

3. To help students interpret specific assessment information. When information is obtained through assessment to meet individual needs, the student needs to know how to interpret the results -- what the information means to him or her as a unique human being.

4. To provide relevant activities and experiences related to assessment and the necessary assistance in helping students internalize these experiences. According

to AEL (1980), an internal frame of reference, as opposed to an external one, provides for a greater depth of self-understanding. One objective of WSACP, then, was to present self-assessment as an internal, rather than an external interpretation issue. Where interpretation is external (interpreted by the counselor or teacher) students often report the following impressions (AEL, 1980):

"the test told me I should...."

"the counselor told me I ought to...."

The development of an internal interpretation process encourages students to experience individual control of career-related information. This type of control increases the meaning of information for the student. Internal interpretation is associated with words such as "elective", and "select", which meet individual needs, rather than "required" and "prescribed" which meet institutional needs (AEL, 1980). According to Knefelkamp and Slepitza (1976) these kinds of semantic changes in student vocabulary or writing signifies developmental movement within the context of the Perry scheme.

5. To help students select various courses or programs of study.

68

Conclusion


The philosophical and structural framework of WSACP, a higher education career program designed to impact cognitive components of the career development process, was rooted in the theoretical paradigms of career and cognitive development provided by Tiedeman (1961, 1963), and Perry (1970, 1981). For guidance in instructional approach and activities, WSACP gained additional support from Appalachia Educational Laboratory's Career Planning and Decision Making (CPDM) course for college students. CPDM, which also relied heavily on Tiedeman's career development framework, was adapted to provide a working "fit" with the writing emphasis of WSACP.

Within the context of these theoretical foundations, WSACP was considered a "developmental" intervention, stressing writing and other activities designed to facilitate cognitive growth processes seen as essential by Perry in developing the capacity for mature choice and commitment. Course activities also incorporated the critical developmental notions proposed by Sanford (1966) of "challenge" (to the next cognitive level), and "support" (developmental growth typically involves personal redefinition, thus posing a potential threat to the self).

The theoretical underpinnings of WSACP that were outlined in this chapter are integrated into specific course components in Appendix F.

# CHAPTER III


## METHOD


The primary purpose of this study was to investigate whether a specific treatment approach, "Writing for Self Assessment and Career Planning" (WSACP), was beneficial in increasing college student cognitive complexity beyond normal maturational development. Student cognitive complexity was assessed along the Perry scheme of intellectual and ethical development.

A secondary purpose was to investigate whether WSACP was effective in increasing student retention rates as compared to other beginning-level college students.

This chapter details the methods used in these investigations. The design of the study, population and sample, independent and dependent variables, and instrumentation are described. Procedures are outlined for the administration of the cognitive complexity assessment instrument, and for investigating the effects of the experimental treatment on student retention. The methods employed in the analysis of data are also discussed.

## Design of the Study

A pretest/posttest quasi-experimental design was implemented to compare cognitive complexity changes in freshman students among one treatment (career oriented English class) and two control groups (a regular English class and a mathematics class). This design is shown in Figure 3.1.

Testing was accomplished at the beginning and end of an 11 week term in the three intact college Freshman classes. Measures were taken on student cognitive complexity using two essays written at each timepoint.

## Population and Sample

The sample selected for this study was drawn from Northern Virginia Community College (NVCC), a multi-campus institution serving approximately 59,000 students from the counties of Arlington, Fairfax, Loudoun, Prince William, and the cities of Alexandria, Falls Church, Fairfax, Manassas Park and Manassas, Virginia. These communities are near the metropolitan area of Washington, D.C., and are both urban and suburban in nature. As do most community colleges, NVCC offers two major types of associate degree-level programs: transfer (freshman and sophomore courses in the arts and sciences, and terminal (technical/occupational courses).

TESTING SEQUENCE

| GROUP | PRE | POST |
|---|---|---|
| TREATMENT (Career Oriented English Class) | | |
| CONTROL 1 (Traditional English Class) | | |
| CONTROL 2 (Math Class) | | |

*Figure 3.1.*  *Pretest/posttest quasi-experimental design*

NVCC's Fall 1987 quarter, in which the study took place, began September 30 and ended December 18. All NVCC quarters consist of an 11 week period; ten weeks of instruction and one for final exams. The experimental treatment (WSACP) was integrated during this 11 week period into a traditional freshman English course (English Composition I). This is the initial college composition class that freshman students normally take in their first quarter of college study.

In the term that the study took place, 13 day-time sections of English Composition I were available for student selection. Day-time freshman students attending classes at Woodbridge Campus primarily choose their English and other courses because of the convenience of time frame and the needs of their particular program of study (T. Niles, Dean of Student Development, NVCC, personal communication, September 1, 1988).

The experimental treatment group consisted of 23 students who selected, from the 13 available sections, the career-oriented English Composition I course (WSACP). The twelve other day-time sections of English Composition I that were available for selection were taught in a more traditional or typical mode. Students scheduled themselves for WSACP from the printed college schedule of classes. In addition to typical course information, such as section

number, day, time, and location, the schedule emphasized the career-related nature of this particular English Composition I section. This additional course information was provided in the following manner:

English Composition I: "Writing for Self-Assessment and Career Planning. Team taught with a member of the Counseling staff".

WSACP met on Mondays and Wednesdays, from 11:00 A.M. to 12:00 noon, and on Fridays from 11:00 A.M. to 1:00 P.M. This schedule/time frame was considered a convenient and accessible one for most students.

Control Group 1 consisted of a typical day-time section of English Composition I. This class was comprised of 21 students. This particular section of English was selected as a control group prior to student registration, primarily because of instructor willingness to have her class participate as a study control.

Control Group 2 consisted of 23 students in a Freshman level mathematics course: "College Mathematics I". Three day-time College Mathematics I courses were available for student selection. The particular class that was selected as a control was also chosen prior to registration and for the same reasons as Control 1 (i.e., instructor willingness to participate).

Students from both control groups chose their classes from the printed college schedule, which presented the course information in typical fashion: course title, section number, day, time, and location. Because of the manner in which students selected the three courses under consideration in this research effort, study participants were likely to be representative of the freshman community college population from similar urban/suburban settings.

## Independent Variable

In this study the independent variable (treatment) consisted of three levels: one experimental (WSACP) and two control groups.

Experimental treatment group. The experimental treatment, English Composition I: "Writing for Self-Assessment and Career Planning" (WSACP), was a structured learning environment consisting of the following characteristics:

1. WSACP was offered as a freshman level, first quarter class. It was integrated with the traditional English curriculum and offered on a credit basis. Students received the normal three credits for English Composition I as well as one required credit for "Freshman Orientation", normally taught as a separate class by Student Development personnel. Both classes were required freshman courses.

2.  WSACP was offered as an interdisciplinary course involving both English and Student Development faculty. The course was co-taught by an English professor and this researcher, a member of the Student Development/Counseling Center staff.

3.  WSACP was tied to both (a) the self-assessment domain of the career decision making process, and (b) cognitive development levels:

A.  WSACP was based on Tiedeman's (1961, 1963) conceptualization of the career process, and an adaptation of Appalachia Educational Laboratory's (AEL, 1980) Career Planning and Decision Making (CPDM) course for college students. CPDM also relied heavily on Tiedeman's career development theory.

B.  Level of cognitive development (complexity), as identified by Perry (1970) was viewed in this course as a critical component of career development. Career development/self-assessment activities were structured to facilitate cognitive development along the Perry scheme. WSACP, therefore, was considered to be a "developmental" intervention, stressing writing and other activities designed to facilitate cognitive growth processes seen as essential by Perry (1970) in developing mature choice and commitment. Course activities also incorporated the critical developmental notions proposed by Sanford (1966) of "challenge" (to

the next level) and "support" (developmental growth typical-
ly involves personal redefinition, thus posing a potential
threat to the "self").

For a complete description of WSACP see appendices D
through G.

Control groups. The first control group consisted of
students in a traditional freshman college English course.
This group was selected because of the expected similarities
in numbers, learning environment, and student characteris-
tics as compared to the treatment group.

The second control group was a freshman mathematics
class. This group was chosen because development in mathe-
matical analysis skills is theoretically likely to increase
the ability to think abstractly, which should positively
impact on cognitive development. This second control group,
therefore, was chosen to provide an additional check on the
efficacy of WSACP in promoting cognitive development.

## Instrumentation and Dependent Variables

The dependent variables in this study were two measures
of student cognitive complexity, as assessed along the Perry
scheme of intellectual and ethical development by the
Measure of Intellectual Development (MID). The MID was
created by Knefelkamp and Widick at the University of

Minnesota in the early 1970's. It is currently the most widely used and best researched instrument for the assessment of the intellectual dimension of Perry's scheme of intellectual and ethical development (Moore, 1985). The MID was designed to reveal cognitive structure development in Perry positions 1-5 (see Appendix A). It does not adequately measure the identity/commitment aspects indicative of positions 6-9 (Moore, 1985). In other words, the MID assesses that part of the Perry scheme believed to be primarily cognitive/intellectual (Moore, 1986).

The MID is a cognitive task comprised of several semi-structured, open ended essays. These essays are designed to reflect (generate) the writer's underlying cognitive structure as that structure relates to the specific essay topic (conceptual domain) in question (Moore, 1985). Each MID essay takes fifteen to twenty minutes to complete. The instrument was designed to be administered in a controlled, time-limited environment such as a classroom.

There are three currently developed MID essays: A, B, and C. Essay A addresses the conceptual content area of general classroom learning. It asks students to describe the most positive classroom experience they have had in a formal educational setting. Essay B addresses the conceptual content area of decision making. It asks students to describe a recent decision situation in their lives. Es-

say C, derived from the Knefelkamp-Slepitza career adaptation of the Perry model, addresses the conceptual content area of career. This protocol asks students to discuss the things they consider important when thinking about career issues. These three currently developed MID essays are not subtests of a single measurement, but can independently assess Perry position.

The current study utilized Essays A and C of the MID. Scores produced by these essays represented measures on the dependent variables in this study.

One reason Essay A was chosen was because it is the most widely used and researched MID protocol. It also contains, unlike the other protocols, a well-researched alternative form that is ideal for use with pre-post designs such as the present study. The most important reason this essay was chosen was because it is the most frequently used protocol for the purposes of determining "pure Perry position", that is, the student's "general process" for construing knowledge and learning (Moore, 1985). Facilitating general intellectual growth along the Perry scheme was the primary intent of WSACP. According to Sheese and Radovanovic (1984), impacting the individuals' general process is a critical determinant of growth in more specific conceptual areas, such as career.

A given individual is likely to possess slightly varying levels of development in cognitive structure within

different conceptual areas (Harvey et al., 1961). This notion of varying intellectual development has been substantiated in more recent research by Heath (1978), Kurfiss (1977), and Rest (1979). It has been hypothesized (Kurfiss, 1977) that students are likely to exhibit more advancement in conceptual areas in which there is persistent engagement. Essay C, which measures Perry position within the specific learning domain of careers, was therefore chosen because its particular orientation relates directly to the focus of the present research study. It should be noted that, unlike Essay A, there is no pre and posttest available for Essay C. The same version, therefore, was used in both testing sessions. Additionally, Essay C has not been developed, used, nor validated to the extent of Essay A (W. Moore, Director, CADI, personal communication, February 13, 1988).

Sheese and Radovanovic (1984) also argued that when there is advancement in cognitive structure or level of thinking in a specific environment, there is a positive effect on the general intellectual process. This effect on general process, in turn, positively effects growth in more specific conceptual areas or domains. From this research on general and specific cognitive growth, it appears that both are critically interrelated and important processes in the maturation of intellectual components of career development. Therefore, both Essays A and C were utilized in this study to reflect this synergistic relationship.

Figure 3.2 describes the relationship of the components used in this study in the assessment of student intellectual development, or cognitive complexity: (a) the Perry scheme of intellectual and ethical development, (b) the Measure of Intellectual Development (MID), (c) the specific protocols of the MID utilized in this study, Essays A and C, and (d) the dependent variables for this study, the student scores produced by Essays A and C. Appendix C provides a chart that describes in more detail these components and the rationale for their inclusion in this research effort.

Scoring of the MID. Because the MID is a copywritten instrument, MID essays can only be evaluated through the Center for Application of Developmental Instruction (CADI) by certified raters. In order to be certified, a trainee must attain a 90% agreement within one-third Perry position with other CADI certified personnel.

The evaluation of each protocol or essay by CADI provides a single "Perry rating" that, as has been stated, ranges along a theoretical continuum from position 1 through position 5. In actual practice, however, ratings that would indicate a position 1 perspective have not been found. Even in Perry's (1970) original study, position 1 was a hypothetical and conceptual extension of the Perry scheme, thus actual ratings on the MID range from 2 through 5 (Moore, 1986). These ratings are derived from a system of concep-

Theory

<div style="text-align:center">

┌─────────────────────────┐
│   *Perry scheme of*     │
│   *Intellectual and*    │
│ *Ethical development*   │
└─────────────────────────┘

</div>

Instrument

<div style="text-align:center">

┌─────────────────────────────┐
│ *Measure of Intellectual*   │
│      *Development*          │
│         *(MID)*            │
└─────────────────────────────┘

</div>

Instrument
Subtests

┌────────────────────────────┐   ┌────────────────────────────┐
│        *Essay A*           │   │        *Essay C*           │
│ *Assessment Domain:*       │   │ *Assessment Domain:*       │
│ *Level of complexity of*   │   │ *Level of complexity*      │
│ *"general process" for*    │   │ *within the conceptual*    │
│ *construing knowledge*     │   │ *area of career*           │
└────────────────────────────┘   └────────────────────────────┘

Dependent
Variables

┌────────────────────────────┐   ┌────────────────────────────┐
│ *Student scores on*        │   │ *Student scores on*        │
│ *Essay A*                  │   │ *Essay C*                  │
└────────────────────────────┘   └────────────────────────────┘

*Figure 3.2.* Relationship of components used in the assessment
of student cognitive complexity

tual cues/criteria established and refined through extensive research and data collection by such researchers as Cornfeld and Knefelkamp (1979), Knefelkamp (1974), Mentkowski, Moeser, and Strait (1983), Slepitza (1976), Wertheimer (1976), and Widick (1975). The cues/criteria used to assess Perry position have been found by Moore (1985) to be both stable over the years and consistent with student character-istics cited in Perry's (1970) original research.

CADI utilizes two highly trained raters per essay in order to provide a measure of reliability for the complex task of essay evaluation. Determination of Perry position is initially accomplished independently by each rater. A completed essay is first given a three digit rating by each evaluator (e.g. 2.00). This rating would either be a whole number (e.g. 2.00, 3.00...5.00) to indicate "stable" Perry position, or a one-third interval rating between whole numbers (e.g. 2.33, 2.67) to indicate transitional growth towards the next Perry position. For example, a rating of 2.00 would be "stable" position 2.00; 2.33 and 2.67 ratings would reveal a transition, or growth toward position 3.00. This division of stable levels into one-third intervals allows for an extension of the original Perry positions 2.00 through 5.00. In some instances a fourth designation is possible when the MID essay does not reveal Perry position with full clarity but there is sufficient evidence to

approximate a rating. In these cases, the Perry rating is expressed as an estimated or "ballpark" score. For example, "BP 3" means "sufficient evidence to estimate at Perry position 3"; "BP 2/3" means "estimated between 2 and 3". This latter score is treated as a 2.50 for research purposes, a "midpoint" designation between stable positions 2.00 and 3.00 (Moore, 1986). A numerical score is given to this "in between" rating for research purposes only and does not necessarily indicate growth towards the next Perry position. Moore (1986) stated that, for most research purposes, it is reasonable to include "BP" ratings in the data collection and evaluation.

After independently assessing the MID essays, the two raters confer to provide a single consensus rating. This consensus is reached through rater collaboration on a contextual application of criteria for the various Perry positions; it is not a single averaging procedure (Moore, 1985). In some instances, when the two raters cannot agree on a reconciled rating, a third rater is included in the reconciliation process. This reconciliation process is considered crucial for reliable and accurate assessment of MID essays (Moore, 1985). Evaluation of MID essays, therefore, is a complex interpretive task. Detailed essay rating criteria and a rigorous rater certification process have

been developed in the attempt to standardize this complex interpretive process.

Reliability. With a developmental-related instrument such as the MID, test-retest reliability would be difficult to ascertain, as the researcher could never be sure whether any differences found were the product of developmental growth or due to measurement imprecision. However, one study, conducted by Harvey (1979), did indicate a test-retest correlation of .87. The most prevalent reliability data available on the MID concerns inter-rater reliability (consistency of observation between raters). MID inter-rater agreement has been measured primarily from two different perspectives: (a) dominant position agreement, and (b) agreement between one third Perry position. Dominant position agreement occurs when two scores are considered the same after rounding to the nearest whole number (stable Perry position). For example, teams at Alverno College and the University of Maryland, based on 1,785 MID essays, have shown inter-rater agreement on dominant Perry position to be 74.4% and 81.3%, respectively (Moore, 1985). Mentkowski (1981), Moore (1985), and Widick (1975) found dominant position agreement ranging from .74 to 1.00. The other prevalent method of measuring inter-rater reliability on the MID, agreement within 1/3 Perry position, requires that the difference between two ratings are less than or equal to 1/3

Perry position. CADI rating teams, based on 1,414 essays, achieved a 93.6% agreement within 1/3 Perry position (Moore, 1986).

Validity. Perry (1970) originally developed his cognitive-developmental model from a longitudinal study of students from Harvard and Radcliffe in the late 1950's and early 1960's. He later attempted to verify these results with research on students from the same institutions -- classes of 1974 and 1979. In these studies he observed similar progressions of intellectual development that were consistent with his earlier observations (Perry, 1981). Moore (1985) outlined similar research, undertaken at Wellesley College (Clinchy, 1975), and Alverno College (Mentkowski, 1981), that confirmed that both male and female students do seem to move along the Perry scheme in a manner similar to that outlined by Perry.

A number of studies (i.e., Meyer, 1977; Widick, 1975) have compared the MID to similar constructs and developmental models. These comparisons have suggested that the MID measures a reasonably distinct domain (Moore, 1985). However, there also appeared to be some overlap among various dimensions of the models compared. This overlap was shown in Widick's (1975) findings of a .51 correlation between the MID and the Schroder, Driver, and Streufert Paragraph Completion Test, a measure of conceptual level.

Meyer (1977) also demonstrated this overlap with his find-
ings of a .45 correlation between Rest's Defining Issues
Test, a measure of Kohlberg's theory of moral development,
and the MID.

According to Moore (1985) and Rest (1979), convergent-
divergent data are but one useful criterion that can be used
in assessing a developmental instrument. "Face validity,
criterion group differences and experimental enhancement
studies are also useful means of establishing validity"
(Moore, 1985, p.3).

In terms of face validity it has already been estab-
lished that Perry was able to find characteristics of
similar developmental progression in both his early (1970)
and later (1981) research. Characteristics reflected on the
MID essays have been found to be consistent with characteri-
stics cited in Perry's research and these cues have been
remarkably stable over the years (Moore, 1985). "The MID's
particular focus on classroom learning and student-gener-
ated, open-ended response also lends critical face validity
to the instrument since Perry's model was derived from
student discussions and focuses specifically on meaning-
making in the classroom" (Moore, 1985, p.3.).

Criterion group differences (e.g. between freshmen and
seniors) predicted by the Perry scheme, have consistently
been found to exist in the predicted direction (Moore,

1985). This indicates that the MID is indeed reflecting the underlying structures of cognition that it was designed to measure.

In examining pre-post gains in relation to developmentally designed classroom experiences, consistent gains found in theoretically-predicted directions adds further credence to the MID's relationship to its underlying construct (Moore, 1985). Studies by Knefelkamp (1974), Stephenson and Hunt (1977), Touchton, Wertheimer, Cornfeld, and Harrison (1977), and Widick (1975), have all found consistent gains in theoretically predicted directions.

CADI Director William Moore has stated that the MID represents the best researched and most efficient alternative to the lengthy Perry interviews for measuring development in cognitive complexity along the Perry scheme (Moore, 1985). While CADI continues work on establishing a broad data base and refining MID rating criteria, this instrument appears to represent a reliable and valid measure of "Perry" position.


Procedures for Data Collection


Measurement of student cognitive change. Changes in student cognitive complexity that occurred within the experimental class, as measured by the MID, were compared to

student changes within the two control groups. Comparison of MID mean scores among the treatment and two control groups was conducted on a pretest/posttest basis. The two separate MID essays, A and C, were utilized for this purpose.

Administration of the MID. Prior to the administration of the MID, all groups received an explanation as to the purpose of the research and were asked for their written permission to be included in the study. The following instructions were provided for completing the MID:

"The two essays that you are being asked to complete deal with how you as an individual think about certain issues. There are no right or wrong responses; what is important is that you present as clearly as you can the way you think about the issue. Each essay usually takes about 15 to 20 minutes to complete."

The experimental and both control groups were pre-tested (Essays A and C), within a classroom setting, in their initial respective meetings during the first week of the 1987 Fall quarter. Posttesting (Essays A and C) ensued for all groups during the final class meeting of the quarter, 11 weeks after pretesting.

Measurement of student retention. The second research question concerned student retention rates. It was hypothesized that the drop-out rates of the experimental class would be lower than those of the 12 other day-time sections of freshman English concurrently operating on the Woodbridge campus during the 1987 Fall quarter. Retention and re-registration data for students in these 13 English sections were obtained from computerized enrollment records of the Woodbridge Campus Admissions and Records Office at the following intervals:

1. At the end of the term (Fall 1987) in which the research study was being conducted, to evaluate in-course drop-out rates.

2. At the end of the subsequent term (Winter 1988 Quarter), to determine whether students were continuing with their college studies.

3. At the conclusion of the Spring 1988 Quarter, to determine whether students continued to persist in their college studies.


Procedures for Data Analysis


Analysis of cognitive complexity. According to Moore (1985) the MID has been utilized in a variety of studies with both traditional and non-traditional aged college

students (e.g. Allen, 1982; Knefelkamp, 1974; Mason, 1978; Meyer, 1977; Slepitza, 1976; Welson, 1982; Widick, 1975). It is the results of these cross-sectional studies that the Center for the Application of Developmental Instruction (CADI) has used to establish a baseline for the assessment of Perry position. This research, along with Perry's cross-sectional studies (Perry, 1970, 1981), has indicated that entering freshmen are at a Perry level somewhere between positions 2 and 3. College seniors normally reveal a Perry level between positions 3 and 4, or in a stable position 4. In establishing this baseline, no sex or racial group differences have as yet been indicated (Moore, 1985). Results of the current study were looked at in comparison to these norms.

As was previously mentioned, MID essays were evaluated by CADI. For individuals who received both pretest and posttest ratings, treatment effects were determined by subtracting the pretest score from the posttest score. If an individual was missing either score these data were excluded from the analysis. Unpaired data existed for one of two reasons: (a) a student was absent at the time of either pre or posttesting, or (b) either the pre or posttest essay was not developed to the point where CADI could establish a MID rating.

Differences in cognitive complexity gains (or losses), among the experimental and two control groups were evaluated using analysis of variance (ANOVA) procedures. A separate one-way ANOVA was performed on student gain scores for both Essay A and Essay C. Both ANOVA's tested whether significant treatment effects existed among the three groups. When significant treatment effects were found in gain scores, a post hoc multiple comparison test (Scheffé's procedure) was performed to determine the exact nature of the differences.

Analysis of student retention. A study was performed to compare the percentage of dropouts from the experimental class to the percentage of dropouts in the other 12 concurrently operating day-time English Composition I sections at Woodbridge Campus. The 12 English classes were combined into one master comparison group to perform the analysis. This was deemed appropriate because of the homogeneity of the participants in these classes in terms of age, academic level, and required performance on an English placement test. Specifically, two aspects of student retention were investigated:

1. Retention rates for the experimental and comparison group were compared separately for the Fall, Winter, and Spring Quarters of the 87-88 academic year. Separate t-tests were performed at each interval to determine whether

the experimental group retention rate exceeded that of the comparison group.

2. The number of quarters a student enrolled during the 87-88 academic year was recorded for each student in the experimental and comparison group. A t-test was performed to determine whether the mean number of quarters enrolled for the experimental group students differed from that of the comparison group students.

CHAPTER IV


PRESENTATION OF RESULTS


The major purpose of this study was to investigate whether a structured course, "Writing for Self-Assessment and Career Planning" (WSACP), was beneficial in increasing student cognitive complexity beyond normal maturational development. Cognitive complexity was assessed along the Perry scheme of intellectual and ethical development by the Measure of Intellectual Development (MID). A pretest/posttest quasi-experimental design was implemented to compare cognitive changes among an experimental and two control groups.

A secondary purpose of this study was to investigate the effects of WSACP on student retention. This was accomplished by comparing the retention rates of the treatment group to 12 concurrently operating freshman English classes.

This chapter contains the results of these investigations and includes: (a) demographic data of study participants, (b) results of the cognitive complexity analysis, and (c) the results of the student retention analysis.

Demographic Profile of Study Participants

The experimental treatment took place at Northern Virginia Community College (NVCC), Woodbridge Campus, in the 11 week, Fall, 1987 quarter. The experimental treatment group consisted of 23 students who selected, from the 13 available freshman English sections, the career-oriented Composition I course (WSACP). Control Group 1 consisted of 21 students enrolled in a typical section of English Composition I. Control Group 2 consisted of 23 students in a freshman-level mathematics course.

As discussed in Chapter III, only students who received both pretest and posttest scores were included in the cognitive complexity analyses. Therefore, sample sizes are different for the Essay A gain score, Essay C gain score, and correlation analyses. For example, for a student to be included in the Essay A gain score analysis, both pre and posttest scores for Essay A must have been available. An explanation of the discrepant sample sizes is summarized in Table 4.1.

Table 4.2 provides a demographic profile of individuals with paired scores on Essay A, the instrument used to measure "general" cognitive complexity. Table 4.3 provides a demographic profile of individuals with paired pretest and posttest scores on Essay C, the instrument used to measure cognitive complexity within the conceptual domain of career.

*Table 4.1*

*Explanation of Different Sample Sizes in Study Analyses*

| ANALYSIS | GROUP | ORIGINAL NUMBER OF PARTICIPANTS | NUMBER INCLUDED IN ANALYSIS | PARTICIPANTS NOT INCLUDED IN ANALYSIS | REASON FOR NON-INCLUSION | | |
|---|---|---|---|---|---|---|---|
| | | | | | Unratable Scores | Dropped Prior To Post-Test | Absent For Post-Test |
| Essay A & C Pretest Correlation Analysis (Correlation) | Experimental | 23 | 20 | 3 | 3 | 0 | 0 |
| | Control 1 | 21 | 18 | 3 | 3 | 0 | 0 |
| | Control 2 | 23 | 18 | 5 | 5 | 0 | 0 |
| Essay A Gain Score Analysis (ANOVA and t-test) | Experimental | 23 | 20 | 3 | 1 | 1 | 1 |
| | Control 1 | 21 | 13 | 8 | 5 | 2 | 1 |
| | Control 2 | 23 | 13 | 10 | 1 | 7 | 2 |
| Essay C Gain Score Analysis (ANOVA and t-test) | Experimental | 23 | 17 | 6 | 4 | 1 | 1 |
| | Control 1 | 21 | 7 | 14 | 11 | 2 | 1 |
| | Control 2 | 23 | 12 | 11 | 2 | 7 | 2 |

*Table 4.2*

*Demographic Profile of Students with Paired Pretest and Posttest Scores on Essay A*

|  | Experimental | Control 1 | Control 2 |
|---|---|---|---|
| Total Number of Participants | 20 | 13 | 13 |
| **GENDER** | | | |
| Female | 9 | 8 | 4 |
| Male | 11 | 5 | 9 |
| **RACE** | | | |
| White | 20 | 13 | 13 |
| Non-White | 0 | 0 | 0 |
| **ACADEMIC STATUS** | | | |
| Full Time | 18 | 10 | 11 |
| Part Time | 2 | 3 | 2 |
| **COURSE OF STUDY** | | | |
| Transfer Majors | | | |
| Declared Major | 7 | 5 | 6 |
| Undeclared | 10 | 4 | 6 |
| Technical/Vocational | 2 | 3 | 1 |
| Self-Enrichment | 1 | 1 | 0 |
| **ACADEMIC YEAR** | | | |
| Freshman | 19 | 13 | 11 |
| Sophomore | 0 | 0 | 2 |
| Not Applicable/Self-Enrichment | 1 | 0 | 0 |
| Median Age | 18 | 18 | 19 |

*Table 4.3*

*Demographic Profile of Students with Paired Pretest and Posttest Scores on Essay C*

|  | Experimental | Control 1 | Control 2 |
|---|---|---|---|
| Total Number of Participants | 17 | 7 | 12 |
| **GENDER** | | | |
| Female | 8 | 5 | 4 |
| Male | 9 | 2 | 8 |
| **RACE** | | | |
| White | 17 | 7 | 12 |
| Non-White | 0 | 0 | 0 |
| **ACADEMIC STATUS** | | | |
| Full Time | 15 | 7 | 10 |
| Part Time | 2 | 0 | 2 |
| **COURSE OF STUDY** | | | |
| Transfer Majors | | | |
| Declared Major | 6 | 4 | 8 |
| Undeclared | 8 | 2 | 3 |
| Technical/Vocational | 2 | 1 | 1 |
| Self-Enrichment | 1 | 0 | 0 |
| **ACADEMIC YEAR** | | | |
| Freshman | 16 | 7 | 10 |
| Sophomore | 0 | 0 | 2 |
| Not Applicable/Self-Enrichment | 1 | 0 | 0 |
| Median Age | 18 | 18 | 19 |

With the exception of gender, Tables 4.2 and 4.3 reveal that the experimental and two control groups appear similar for demographic characteristics available for comparison. The gender difference should not be of consequence to this study, as research by Moore (1985), and Perry (1970), reveals no relationship between level of cognitive complexity and gender.

## Cognitive Complexity

A correlation analysis was initially performed to determine whether there was any relationship between an individual's pretest scores on Essay A and Essay C of the MID. If a relationship had existed, indicating the essays were measuring similar domains, a single multivariate analysis of variance (MANOVA) would have been performed. Results of this investigation, shown in Table 4.4, indicated there was no significant pretest score correlation.

Because there was no relationship between Essay A and Essay C pretest scores, two separate analyses of variance (ANOVA) were performed to determine whether WSACP produced higher gain scores than the control groups on the two MID essays.

Essay A. An initial ANOVA was performed to determine whether mean pretest scores differed among the experimental and two control groups. No significant differences were

*Table 4.4*

*Correlation Between Pretest Scores
on Essay A and Essay C*

| GROUP | CORRELATION | P-VALUE |
|---|---|---|
| Experimental (n=20) | .06 | .81 |
| Control 1 (n=18) | -.34 | .17 |
| Control 2 (n=18) | .08 | .74 |
| All Combined (n=56) | .03 | .85 |

discovered $(F_{(2,43)}=0.23, p>.80)$. Because pretest scores did not differ significantly, an interpretation of mean gain score differences on Essay A could be made with greater confidence. Results of the ANOVA comparing group gain scores indicated that significantly different mean gain scores existed (at the .05 level) among the experimental and two control groups $(F_{(2,43)}=4.31, p < .02)$. Scheffé's multiple comparison test indicated that the mean WSACP group gain was significantly higher than Control Group 2, but not significantly different from Control Group 1. Scheffé's procedure also revealed that the two control groups' gain scores did not differ significantly from one another. A summary of Essay A gain scores is shown in Table 4.5.

Although the above results indicated statistical differences existed only between the Experimental and Control 2 group, it also appeared likely, upon close examination of the data, that real, or meaningful, differences existed between the mean gain scores of the Experimental and Control 1 group as well. Due to the relatively small size of Control Group 1 (primarily the result of unratable test scores), meaningful differences may not have appeared as statistical differences in this study.

This assertion was explored by combining the two control groups and comparing the combined mean gain score to

*Table 4.5*

*Summary of Essay A Gain Scores*

|  | Experimental (n=20) | | Control 1 (n=13) | | Control 2 (n=13) | |
|---|---|---|---|---|---|---|
|  | M | (sd) | M | (sd) | M | (sd) |
| Pretest | 2.74 | (.25) | 2.69 | (.21) | 2.75 | (.20) |
| Posttest | 3.03 | (.29) | 2.78 | (.26) | 2.74 | (.28) |
| Gain | 0.29 | (.34) | 0.09 | (.27) | -0.01 | (.23) |

for Gain: $F(2,43) = 4.31$

p-value $<$ .02

that of the experimental group. Collapsing the control groups into one larger sample was possible because of the similarity of the two groups as indicated by a comparison of available demographic data (see Table 4.2). Also, a t-test comparison of the two control groups revealed that they did not differ significantly on Essay A gain scores (t=0.91, p >.37).

The comparison of mean gain scores of the experimental and combined control groups was accomplished using a two-sample t-test. The results of this analysis indicated that the mean gain scores of the experimental group were significantly higher (at the .05 level) than those of the combined control groups (t=2.84, p < .01). These results are summarized in Table 4.6.

Essay C. An initial ANOVA was performed to determine whether mean pretest scores differed among the experimental and two control groups. No significant differences were discovered (F(2,33)=1.96, p>.16). Because pretest scores did not differ significantly, an interpretation of mean gain score differences on Essay C could be made with greater confidence. Results of the ANOVA comparing group gain scores indicated that no significant gain score differences existed among the three groups (F(2,33)=2.46, p >.10). The reduced sample size of Control Group 1 should be noted as a possible contributor to these findings. Of the original 18 students in Control 1 who took the Essay C posttest,

*Table 4.6*

*Experimental v. Combined Control Groups for*
*Essay A Gain Scores*

|  | Experimental (n=20) | | Combined Controls (n=26) | |
|---|---|---|---|---|
|  | M | (sd) | M | (sd) |
| Pretest | 2.74 | (.25) | 2.72 | (.20) |
| Posttest | 3.03 | (.29) | 2.76 | (.26) |
| Gain | 0.29 | (.34) | 0.04 | (.25) |

for Gain: t = 2.84
p < .01

11 tests were not rated high enough to receive a MID rating. Had these posttests been gradable, it is quite likely that the mean gain for Control 1 would have been considerably lower. Essay C gain scores are summarized in Table 4.7.

As was done with Essay A gain scores, the two control groups were combined and compared with the experimental group's gain using a two-sample t-test. No significant differences were found to exist (t=0.81, p > .42). However, it was noted that the experimental group gain score on Essay C (+.23) did seem to compare favorably to the combined control gain score (+.15). The results of the t-test are presented in Table 4.8.

## Retention Rate Results

Two specific aspects of student retention were investigated in this study. These aspects were: (a) a comparison of retention rates between students in the experimental group and those in a group consisting of 12 combined English classes, in each of three academic quarters, and (b) a comparison of the mean number of quarters enrolled between students in the experimental group and those in the combined group of 12 English classes, across the same three quarters. The results of the investigations are as follows.

*Table 4.7*

*Summary of Essay C Gain Scores*

|  | Experimental (n=17) | | Control 1 (n=7) | | Control 2 (n=12) | |
|---|---|---|---|---|---|---|
|  | M | (sd) | M | (sd) | M | (sd) |
| Pretest | 2.51 | (.32) | 2.38 | (.36) | 2.68 | (.34) |
| Posttest | 2.74 | (.30) | 2.71 | (.30) | 2.72 | (.28) |
| Gain | 0.23 | (.35) | 0.33 | (.27) | 0.04 | (.23) |

for Gain: $F(2,33) = 2.46$
p-value > .10

*Table 4.8*

*Experimental v. Combined Control Groups for
Essay C Gain Scores*

|          | Experimental (n=17) | | Combined Control (n=19) | |
|----------|------|--------|------|--------|
|          | M    | (sd)   | M    | (sd)   |
| Pretest  | 2.51 | (.32)  | 2.57 | (.37)  |
| Posttest | 2.74 | (.30)  | 2.72 | (.28)  |
| Gain     | .23  | (.35)  | .15  | (.28)  |

$t = 0.81$
$p > .42$

Separate quarter comparison. Retention rates for the experimental and comparison group (the 12 combined English classes) were analyzed separately for the Fall, Winter, and Spring Quarters of the 87-88 academic year. This comparison was accomplished at the end of each term. Separate t-tests were performed at each interval to determine whether the experimental group retention rate exceeded that of the comparison group. Results of these tests are shown in Table 4.9.

No statistically significant results were found at the .05 level of significance. However, it was noted that the Winter quarter analysis (Experimental: 87% retained versus 72% for the Comparison Group) approached the .05 level of significance (p >.058). Given the low experimental group sample size it might have been reasonable to have used an alpha of .10, where a significant statistical difference would have been achieved.

It seems reasonable, then, to consider that meaningful differences may have existed between the retention rates of the experimental and comparison group. For example, the Winter quarter analysis suggested that for every 1000 entering freshmen, 870 WSACP students might be retained over the course of two academic terms, as compared to 720 students not receiving the experimental class. This assertion of meaningful differences is shown graphically in Figure 4.1.

*Table 4.9*

_Summary of Retention Rates by Quarter_

|  | Fall | Winter | Spring |
|---|---|---|---|
| Experimental Retention Rate (n = 23) | 95.7 (± 6.0) | 87.0 (± 9.2) | 69.6 (±10.3) |
| Control Retention Rate (n = 266) | 90.6 (± 1.8) | 71.8 (± 2.7) | 58.3 (± 3.0) |
| t-value | .81 | 1.57 | 1.06 |
| p-value | .21 | .06 | .15 |
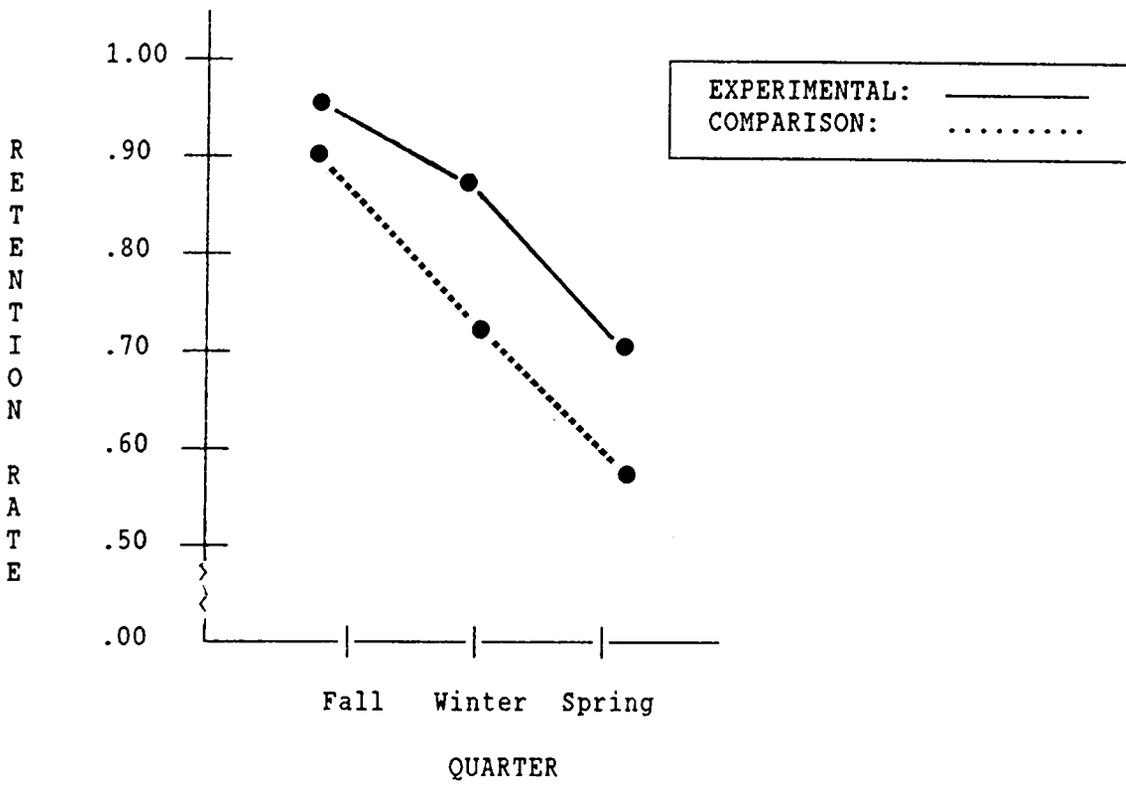
*Figure 4.1: Retention rates by quarter*

111

Mean number of quarter comparison.   In the second
retention aspect studied, the  number of  quarters a student
enrolled  during  the  87-88  academic year was recorded for
each student in the  experimental and  comparison group.   A
t-test was  performed to  determine whether  the mean number
of quarters enrolled for the experimental group students ex-
ceeded  that  of  the  comparison group students.  This test
yielded a  p-value of  .076, indicating  that no significant
difference  in  retention  rates  existed (at the .05 level)
between the two groups.   Again, while these results were not
significant at  the .05  level, they  would have been if the
.10 alpha level was used.  Given the low sample  size of the
experimental  group,  use  of  the higher significance level
would have been reasonable.

As in the prior retention analysis, this suggested that
although no  statistical differences  were found, meaningful
differences may have existed  between the  two groups.   For
example,  70% of  the WSACP  group  enrolled for all three
quarters, as opposed to  a  56%  enrollment  figure  for the
comparison  group.   These  percentages  were obtained from
the same  student registration  records used  to produce the
two retention  analyses cited above.   In the previously dis-
cussed example of 1000 freshmen students,  these percentages
indicated that  700 WSACP  students would  have enrolled for
three quarters, as opposed to 560 students not receiving the
experimental class.   This assertion of meaningful differen-
ces is shown graphically in Figure 4.2.

MEAN NUMBER OF QUARTERS

```
3  +
              2.52 **
                � ▬▬▬
              ▓▓▓▓▓
    2.21 *    ▓▓▓▓▓
     ▬▬▬      ▓▓▓▓▓
2  +  ▓▓▓     ▓▓▓▓▓
     ▓▓▓▓     ▓▓▓▓▓
     ▓▓▓▓     ▓▓▓▓▓
     ▓▓▓▓     ▓▓▓▓▓
1  +  ▓▓▓     ▓▓▓▓▓
     ▓▓▓▓     ▓▓▓▓▓
     ▓▓▓▓     ▓▓▓▓▓
     ▬▬▬▬     ▬▬▬▬▬
   Comparison  Experimental
```
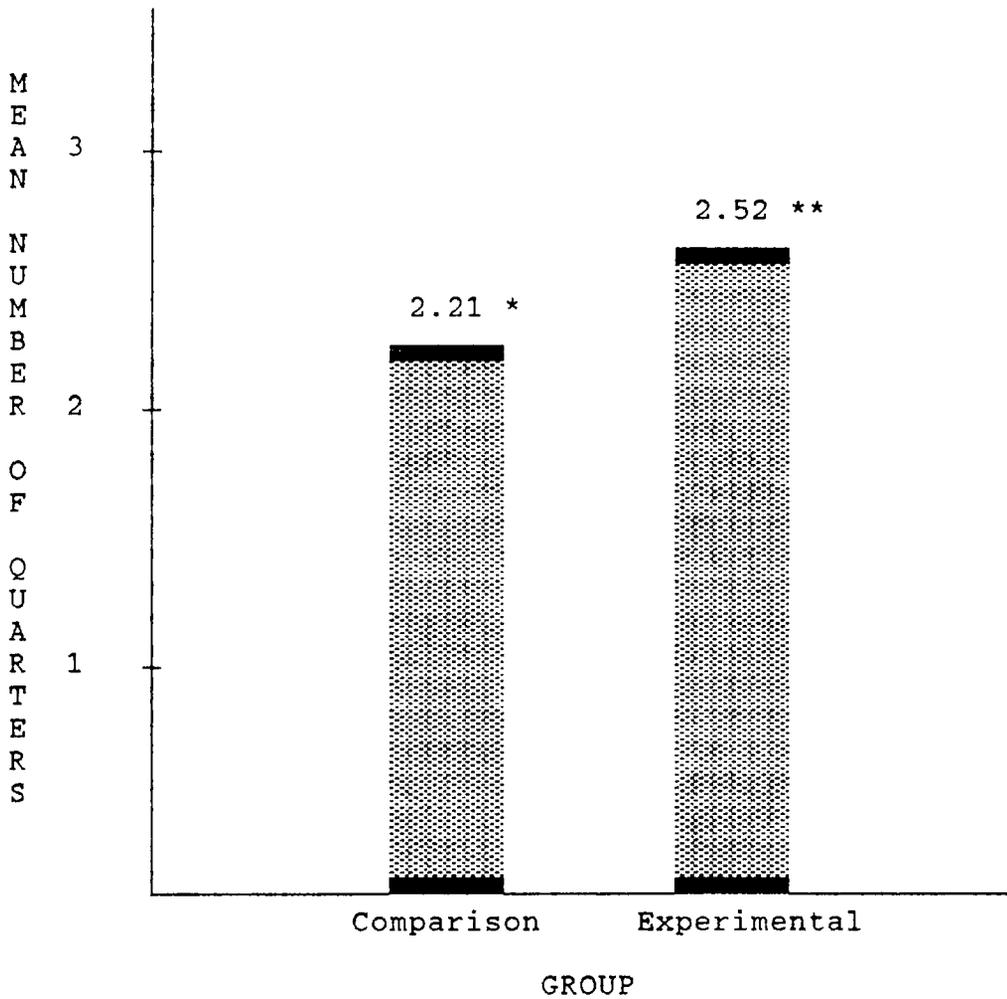
GROUP

*Figure 4.2: Comparison of mean number of quarters retained for comparison and experimental groups*

\* In a hypothetical example of 1,000 students, 560 would be retained after one year.

\*\* In a hypothetical example of 1,000 students, 700 would be retained after one year.

CHAPTER V


DISCUSSION AND RECOMMENDATIONS


Summary


Students attend college primarily for career-related reasons (AEL, 1980; Campbell, 1980; Carney & Barak, 1976). Not only is career development important to students, it is also a critical consideration from societal and community college perspectives. A related consideration, student retention, appears to be highly correlated with the quality and level of student career development (Allbritten, 1983; Beal & Noel, 1980; Healy, 1984; Theophilides et al., 1984).

Within the career development process, Perry (1970, 1981) indicated that general maturation in structure of thought is a critical determinant of growth in more specific domains, such as career. His model of development, the Perry scheme, suggests a method of understanding students' general and career-specific thought structure. This model also provides a schema against which development in structure of thought can be measured. From the work of Perry and others (i.e., Brabeck & Welfel, 1985; Fischer, 1980; Labouvie-Vief, 1982) in the area of cognitive development, it seems essential to include the dimension of cognitive com-

plexity in the understanding, assessment, and facilitation of student career development.

In attempting to develop an "educational vehicle" for implementing the Perry scheme within a community college context, the literature was searched for possible intervention strategies. The literature review revealed a number of problems in the conception and delivery of traditional career planning and decision making services in institutions of higher education. Among the problems found were limited access (Koehn, 1978), under-utilization of professional services (Pendar, 1981), and a lack of "process" oriented career programs that could respond to the developmental nature of "career" (Koehn, 1978). It was also found that students most in need of career services appeared least likely to volunteer for such activities (Carney & Barak, 1976; Pendar, 1981). Additionally, it was found that students tended to view programs and services offered outside of the traditional academic curricula as "inconsequential" (Mackes & Beidler, 1983). Related to this, Haney and Howland (1978) found that students placed added value on career programs that were offered for college credit.

The research suggested that one of the more promising credit-bearing academic areas that career programs might link with would be freshman English. Adicks (1973) believed that the required English course would be an ideal place to assist with career guidance, and, in institutions that lack

adequate student development personnel, "it may be the only place" (p.2).

The present study, then, was based on the assumptions that an effective career development model would contain several components. First, the course would be developmentally oriented, and would focus on developmental competencies and inadequacies (Morrill & Forrest, 1970; Perry, 1970, 1981; Tiedeman, 1961, 1963). Second, the course would focus on cognitive maturation (Perry, 1970, 1981) through an emphasis on the writing process. Third, the course would be taught within the regular academic curriculum (freshman English), and thus would be taken for academic credit. And, fourth, the course would be collaboratively designed and taught by academic personnel (English faculty) and counseling personnel.

The major purpose of this study, then, was to investigate whether a collaboratively taught, career-oriented freshman college English course, "Writing for Self-Assessment and Career Planning" (WSACP), was beneficial in increasing student cognitive complexity beyond normal maturational development. Cognitive complexity was assessed along the Perry scheme of intellectual and ethical development by the Measure of Intellectual Development (MID). A secondary purpose was to investigate the effects of WSACP on student retention rates. To accomplish this, the retention

rates of the experimental class (WSACP) were compared to the rates of 12 concurrently operating freshman English classes.

## Subjects

The experimental treatment took place at Northern Virginia Community College (NVCC), Woodbridge Campus, in the 11 week, Fall, 1987 quarter. The experimental treatment group consisted of 23 students who selected, from the 13 available freshman English sections, the career-oriented Composition I course (WSACP). Control Group 1 (n=21) consisted of a typical section of English Composition I. Control Group 2 consisted of 23 students in a freshman-level mathematics course.

## Cognitive Complexity: Findings and Conclusions

As an introduction to the findings on the cognitive complexity analyses, it should be noted that, generally, WSACP students had a higher "return" of ratable essays, on both MID protocols, as compared to control group students. This was especially true on the posttests (see Table 4.1). It was believed this higher return rate was due to: (a) WSACP students having a higher level of familiarity and comfort with the concepts and environments being tested, and (b) because of their persistent engagement with the tested

concepts, WSACP students probably felt they had more at "stake".

"General" cognitive complexity. Using analysis of variance procedures (ANOVA), it was found that the general cognitive complexity of the subjects (measured by MID Essay A) in the experimental group increased at significantly higher rates than that of students in the two combined control groups. It was believed that this difference was due to the effectiveness of the teaching/learning model utilized. This developmental model contained the following characteristics, which were believed to have significantly contributed to the success of WSACP:

1. WSACP was firmly grounded to an effective theoretical foundation, which proposed that cognitive and career development are two interdependent processes. From this theoretical perspective comes the belief that an individual's general cognitive development is a critical determinant of growth in more specific conceptual areas, such as career. It is believed that these processes were effectively interconnected in WSACP using the theoretical paradigms of career and cognitive development provided by Tiedeman (1961, 1963), and Perry (1970, 1981).

2. In helping to implement the Perry scheme within the context of an English course, it was believed that the Knefelkamp and Slepitza (1976) paradigm was highly effective. These researchers proposed a model outlining nine

areas of qualitative behavioral change that conceptualized developmental movement within the context of Perry's scheme of intellectual development. This paradigm suggested how one could encourage cognitive growth and provided a focus for course content, writing assignments, essay evaluation, and classroom discussion. By outlining the progression of development in these critical areas of maturational growth, this model suggested a process that could be used to encourage and challenge students to higher developmental levels.

3. WSACP's underlying theory was firmly tied to an effective educational approach. A major component of this approach was the use of writing to facilitate cognitive components of the career development process. A traditional freshman English class provided an excellent vehicle to help identify the structure of student thought and facilitate its development. Further, this approach incorporated the combined skills and resources of an English instructor and career counselor. Being taught inside the traditional curricula on a credit basis gave WSACP additional credibility with freshman students.

Career-specific cognitive complexity. The results of MID Essay C, which measured cognitive complexity within the specific conceptual domain of career, were more ambiguous. This was somewhat expected in that Essay C had not been developed, used, nor validated to the extent of Essay A

(W. Moore, Director, CADI, personal communication, February
12, 1988). Therefore, Essay C may not have been as accurate
in its measurement of the intended domain. Moreover, the
pretest correlation analysis of student scores on Essays A
and C revealed almost no relationship between the two
subtests. According to the theory outlined in this study,
different conceptual domains may develop at slightly varying
rates. However, they should also show a substantial rela-
tionship. Therefore, there should have been at least some
overlap between general (Essay A) and career-specific
(Essay C) cognitive complexity.

Although the experimental group showed positive gains
as measured by Essay C (+.23), this increase was not statis-
tically significant when compared to the mean gain scores of
Control Group 1 (+.33). However, upon closer inspection of
Control Group 1 results, it appeared that the relatively
high mean gain scores of this group may have been inflated
due to a severely limited sample size. Of the original 18
students in Control Group 1 who took the Essay C posttest,
11 tests were not rated high enough to receive a MID rating.
(It was speculated that this low return of quality essays
for Control 1 was due to an inadvertent conflict with
another assignment that was due on the same date that
posttesting was accomplished.) These 11 scores, therefore,
were not included in the analysis that produced the rela-
tively high Control Group 1 Essay C mean gain score. Had

they been gradable, it is quite likely that the mean gain for Control Group 1 would have been considerably lower. Further, the +.23 mean gain score yielded by the experimental group was deemed statistically significant when compared to the mean gain score of +.04 produced by Control Group 2. This indicates that possible growth of career-related cognitive complexity may have been demonstrated by the students in WSACP. This assertion is given added credence by William Moore, CADI Director, who stated that an improvement in mean gain scores of +.23 over an 11 week period appears to represent meaningful developmental gains (personal communication, February 13, 1989).

## Retention: Findings and Conclusions

Two specific aspects of student retention were investigated in this study. In the first aspect studied, retention rates for the experimental and comparison group (the 12 combined English classes) were analyzed separately for the Fall, Winter, and Spring Quarters of the 87-88 academic year. Separate t-tests were performed at each interval to determine whether the experimental group retention rate exceeded that of the comparison group. Although no statistically significant results were found, it did appear, upon close examination of the data, that real, or meaningful differences existed between experimental and comparison

group retention rates. This appeared especially true for the analysis done at the end of the Winter 88 quarter: 87% of the experimental group had been retained, as compared to 72% of the comparison group (p > .058). As noted in Chapter IV, given the low experimental group sample size, it might have been reasonable to have used an alpha of .10, where a significant statistical difference would have been achieved.

It seems reasonable, then, to consider that meaningful differences may have existed between the retention rates of the experimental and comparison group. For example, the Winter quarter analysis suggested that for every 1000 entering freshmen, 870 WSACP students might be retained over the course of two academic terms, as compared to 720 students not receiving the experimental class.

In the second retention aspect studied, the number of quarters a student enrolled during the 87-88 academic year was recorded for each student in the experimental and comparison group. A t-test was performed to determine whether the mean number of quarters enrolled for the experimental group students exceeded that of the comparison group students. This test yielded a p-value of .076, indicating that no significant difference in retention rates existed (at the .05 level) between the two groups. Again, while these results were not significant at the .05 level, they would have been if the .10 alpha level was used. Given

the low sample size of the experimental group, use of the higher significance level would have been reasonable.

As in the prior retention analysis, this suggested that although no statistical differences were found, meaningful differences may have existed between the two groups. For example, 70% of the WSACP group enrolled for all three quarters, as opposed to a 56% enrollment figure for the comparison group. In the earlier cited example of 1000 freshman students, 700 WSACP students would have enrolled for three quarters, as opposed to 560 students not receiving the experimental class.

From these investigations, it is believed that retention rates were positively affected by the experience students had in the experimental course WSACP. These results were thought to relate to a number of factors, many of them having been suggested by the research and considered in the development of WSACP. These factors are discussed in the implications/recommendations section.

## Discussion, Implications, and Recommendations

### General Implications

As has been stated, WSACP was based on the assumption that an effective career development model would include several components. In addition to concentrating on cogni-

tive-developmental competencies, it was also proposed that an effective course would be taught within the regular academic curriculum (freshman English), and thus would be taken for academic credit. Also, the course would be collaboratively designed and taught by academic personnel (English faculty) and counseling personnel. These components helped shape the development of WSACP, whose primary focus was on cognitive development and retention. However, it is believed that the academic-linkage components, field-tested and validated by the WSACP experience, also contain important implications for higher education, and, specifically, for the areas of English and career counseling. These implications, and the foundations upon which they rest, are discussed below.

The literature suggested that relevancy and value attached to career services by students could be increased by linking career development efforts to the traditional academic curricula within a credit format (Haney & Howland, 1978). Mackes and Beidler (1983) found that subject matter construed by students as being outside of the traditional academic curricula is often considered non-academic, non-important, and relegated to being inconsequential. Further, an academic-counseling linkage increases the "resource base" by utilizing the skills of both academic faculty and student development personnel.

Mackes and Beidler suggested that interdisciplinary collaboration would lessen historical boundary distinctions between curriculum and career interests and "intellectual" and "non-intellectual" concerns. It was theorized in WSACP that as students encountered increased institutional collaboration they would experience a heightened sense of the importance of student development activities and their own personal and career development.

Another facet of this "boundary" problem between curriculum and career interests involves the issue of for-credit career courses. Haney and Howland (1978) summarized a study conducted by Commission VI (Career Planning and Placement) of the American College Personnel Association in 1975. Included in their summary was a statement of their strong belief about the importance of career courses offered on a credit basis:

> Implicit in this study was that career courses for credit were and are important. Not that workshops and non-credit courses are unimportant, but in the system of higher education, value and respect are given to those courses which have academic credit. This is a reality. It is another way to raise the awareness of faculty, students, parents, and alumni to the elements involved in a responsible

choice of one's life-style and direction, and that responsible choice is possible.

(Haney & Howland, 1978, p.77)

Offering career development programs within the traditional academic curricula, and in a credit format, responds to the reality of what is valued and respected within the academic community. It helps increase awareness among faculty, students and parents as to the importance and possibility of responsible choice.

The intertwining of academics with personal and professional development in WSACP was also viewed as a way of helping higher education keep its commitment to the growth of the "whole person". Mackes and Beidler (1983) stated that this concept of "wholeness" in education occurs only to the extent that student development is viewed as a collaborative responsibility shared by the entire institutional community. AEL (1980) argued that, indeed, the "steps" of the career planning process are particularly amenable to influence through a curricular approach, and that career development, therefore, can and should be an "institutional" process as well as a counseling process. Mackes and Beidler also cited two important secondary gains found to exist in interdisciplinary approaches: (a) faculty expressed the feeling that teaching seemed more exciting when it involved dealing with "real" needs and (b) the collaboration process

seemed to increase understanding and appreciation for each others' (teaching faculty/student development professionals) role and increased the quality of contact in other areas.

The ideas presented in this section provided WSACP with both an operational context and a set of assumptions that could, at least to some extent, be validated. Although no objective measures were used to evaluate these ideas, it was believed that the WSACP experience gave evidence to their relevancy and value in terms of career program design. For example, the general persistency exhibited by WSACP students, in terms of learning and assignments, was thought to be connected with the programs' academic-linkage components. Students appeared to feel their experience in WSACP was at least as important as their other classes. Some commented that WSACP entertained a central position in their academic lives because of its personal relevancy, and because of the "attention" (two faculty members) that the college was affording this class.

From a faculty perspective the collaborative experience was also considered successful. Ideas, teaching strategies, and resources were shared and jointly implemented. It was believed this provided for a more creative and dynamic learning environment, translating into a more powerful learning experience for students. Collaborative teaching also seemed to facilitate, for both faculty members, increased quality of contact in other professional areas. A

greater appreciation of each others' roles and responsibilities was also noted.

## Implications and Recommendations for English/Writing

The research suggested that English composition and literature classes would specifically benefit from intertwining with career development efforts. Adicks (1973) stated his belief that college writing and literature courses would gain from this liaison by helping these areas remain flexible and adaptable to prevalent issues of both social and personal concern. He proposed a marriage between thinking and working, and felt that vocational guidance can and should take place in the context of teaching humane values. "This is one of the ways we show students that literature can and does dart some illuminating flashes of light in the dark corners of life" (Adicks, 1973, p.2).

Sprague (1973) argued that within community college programs in communication arts, daily life experiences from real-life career environments must be integrated into the curricula in order to help facilitate a "bridging effect" between school and work. As this gap is indeed bridged, community college courses and student motivation would likely be strengthened because of increased student sensitivity to the importance of communication skills, such as

writing, listening, and reading, in career and professional preparation.

An integrated career development/curricular approach could also be considered important in the way it might impact on the currently developing crises of "careerism versus the liberal arts and humanities". Interdisciplinary efforts can help provide for an eventual juxtapositioning of these two important areas. Indeed, this burgeoning conflict is seen by Saunders (1984) as a "blessing for the humanities" in that it provides impetus to the humanities to adjust teaching and thinking to incorporate basic questions of value and use. Within such an approach, the humanities has the opportunity to demonstrate to students that it can provide profoundly useful, life enhancing skills -- skills that individuals have the responsibility to develop (Saunders, 1982).

There was no effort made in this study to objectively measure the impact of WSACP on student writing. However, subjective evaluations made by the participating English instructor were very positive. They included statements to the effect that the writing produced in WSACP was as good, if not better, than that produced in other freshman English courses. Other important and substantial benefits, as reported by the instructor (and predicted by the research), included an improved working relationship with counseling center personnel and an increased ease and excitement in

working with freshman students. The latter was reportedly due to a decrease in the amount of instructor frustration with the painfully slow progress typically exhibited by students in freshman English.

According to the instructor, the increased ease and excitement and the related decrease in frustration were due to a better understanding of the developmental process and a concomitant appreciation for the enormity and difficulty of the developmental journey. This positive evaluation tendered by the English instructor is believed to be a resultant of both Perry-based instruction and the collaborative teaching experience. Therefore, from the perspective of both the objective analysis produced by this study and the subjective evaluations made above by the participating English instructor, comes the recommendation for further development of collaborative efforts in the areas of writing and career development. Included in this recommendation is the need for more objective measurement of writing outcomes.

Implications and Recommendations: Career Development and Counseling

It appears quite likely that the areas of Student Development and counseling would also be strengthened by a liaison with college English programs. This contention was supported by the WSACP experience.

According to Ivey (1980), language and language systems will become increasingly important to the counseling profession in the facilitation of human growth and development. Denzin (1978) stated that human behavior can be observed at two levels -- the symbolic and the behavioral; understanding and impacting human behavior becomes a function of understanding the range and variety of symbols used. Kelly (1961) pointed out that as an underlying basis for understanding an individual's environmental transactions one would have to know how that individual thinks. These constructs or thought processes are most obviously and clearly represented by the symbols used in language, the words and sentences manifested by the "thinker". As a result, Ivey (1980) postulated that new directions in counselor training would put more emphasis on understanding language and language systems. Ivey reported that "through the detailed analysis of sentences, syntax, and grammar, the operation of decision processes in language will become more apparent, and through this analysis the decisional process that is counseling will become more apparent" (p.14).

WSACP was considered an important research contribution primarily because of its extension of such theoretical perspectives into a practical setting. The encouraging results of this study appear to support a continued liaison of the college-level writing curriculum with the areas of career development and counseling.

The Perry Scheme

The Perry scheme provided the major theoretical under-
pinnings for the career development course WSACP.    It is
believed that the results of the present study support
earlier cited research recommending a continued application
of the Perry scheme in the design and analysis of develop-
mental instruction.    More specifically, these results
support the application of the Perry scheme to a career
development approach such as that used in WSACP.    Some
specific implications, stemming from the use of the Perry
scheme in this study, are as follows.

Within a "Perry" context, the goals of the writing
class, career development, and liberal education appear to
converge. Research by Krupa (1982) indicated that progres-
sion through the Perry scheme seems to parallel the produc-
tion of qualitatively better writing.    The movement toward
cognitive complexity, essential for career development, also
represents a core value of liberal education; therefore the
writing class can become the epitome of both liberal educa-
tion and career development by directly challenging students
to move toward intellectual maturity.

The career development field has expanded in response
to another challenge: an increasing awareness of the com-
plexities of career development and the concomitant need to
focus on process elements in career counseling.    It is

believed that the results of this study lend added support to the idea of teaching process in career-related instruction, rather than the particular products of thinking. In this focus on the process of development, the current study supports the work of Perry and others in the area of cognitive stage development that state it is essential to include the dimension of cognitive complexity in this consideration.

Cognitive stage/learning style interaction. An important characteristic of WSACP was the use of the Myers-Briggs Type Indicator (MBTI) to form homogeneous sub-groups within the classroom environment. Research by Bissiri (1971), and Moore (1985), has suggested that a conceptual link exists between cognitive-development frameworks, such as Perry's, and learning style models, such as the Myers-Briggs. Both may play significant roles in students' ability to learn and cope within the classroom environment. A mismatch from either a stage or style perspective is likely to increase the possibility of "overchallenging" a student, resulting in negative growth or even the possibility of intellectual retreat (Moore, 1985). Improvement in cognitive complexity levels in the experimental class, which was partially organized along the lines of MBTI homogeneous groupings, also supports the notion of a cognitive stage/ learning style interaction. Based on these results it appears that further exploration of stage/style interaction is warranted.

Assessment of educational outcomes. One final remark regarding the application of the Perry scheme to the process of teaching and learning. Currently, there is a strong movement within the educational field to have higher learning institutions take a more critical and objective look at the outcomes of their particular educational processes. This outcome assessment movement will surely focus on the institution's contribution to the students' intellectual and personal development. The results of the current study appear to support the use of the Perry scheme in developing interventions such as WSACP in facilitating, and assessing the outcome of, these intellectual and personal dimensions of student development. Also, because movement through the Perry scheme seems to so closely encompass the wider goals of liberal education, it seems reasonable to recommend including the Perry scheme as an important component of higher educations' outcome assessment process.

In conclusion, both the counseling field and liberal arts approaches to higher education share a similar goal: the development, in the individual, of interpersonal skills and thinking processes necessary for living in today's diverse world. If the goals of teachers and counselors are parallel, then the promotion of growth in the direction of such goals needs a model of development consistent with these overlapping goals. Also, educational "vehicles" for implementing such an interdisciplinary model would be

necessitated. The Perry scheme, as suggested by the re-
search, appears promising in providing a framework for
general educational interventions aimed at enhancing the
development of critical thinking processes in college
students. The results of the present study specifically
support the use of such a framework in enhancing critical
thinking and other cognitive components of the career
development process. Lastly, study results support the use
of Perry-based educational interventions such as WSACP in
tying together the parallel goals of the writing class and
career development.


Retention: Implications and Recommendations


College students are different today than they were
just a few short years ago. Successful retention programs
of yesterday are just not appropriate today. "Retention"
should no longer imply keeping the student enrolled at all
costs. It should imply providing students with enough
quality of experience and personal satisfaction to continue
their enrollment at college. It also implies an institu-
tional commitment to the students' future.

From the literature search (Allbritten, 1983; Healy,
1984) it appears that institutions of higher education
should attempt to relate this "quality of experience" and
"personal satisfaction" to student motives for attending

college.    As  discussed,   most  students  attend  college  for
career-related  reasons  (AEL,   1986;   Campbell,   1980).    The
implications  appear   clear:  if  institutions  of  higher  educa-
tion  are  helping  to  meet  student  career  development  needs  in
meaningful  ways,   then  student  retention  should  be  increased.
The  encouraging  retention  findings   of  this   study  appear  to
support  this  supposition.

Another  reason  it  is  believed  that  WSACP  was  successful
in  retaining  students  related  to  the  course  being  offered  as
a   first-term,   freshman-level   class.     Various   studies   of
student  retention   (Beal  &  Noel,  1980;   Theophilides  et  al.
1984)   highly   correlated   the  quality  of  first  quarter/year
experience  with  student  retention  rates.   This  suggests  that
one  factor   involved  in   retaining  students   after  the  first
quarter  of  enrollment  (the  highest  drop-out  period)  relates
to   providing   students   with   positive   initial   experiences.
Since  reasons  for  persisting  in  college   are  related   to  the
career  and   employment  needs   of  students,    then  the  facili-
tation  of  an  initial  positive  career   development  experience
would   likely   increase   student  retention.   The  encouraging
results  of  the  current  study  support  the  idea   of  first-term
career  development  activities.    It  is  recommended,  there-
fore,  that  freshman  level   career  development   activities  be
included  in   any  comprehensive   retention  program.   However,
it  should  be  noted  that  the  Perry  model  depicts  an  often
slow  and  arduously  difficult  developmental  pathway.   This

implies that career development activities also be ongoing
and responsive to the changing developmental needs of
college students.

In summary, most of the studies cited in the literature
have suggested that the current and projected enrollment
crises in higher education relates more to increased attri-
tion than to recruitment difficulties. It seems apparent
that stable enrollments will depend to a great extent on
retaining the currently enrolled student. Programs such as
WSACP, therefore, appear promising in helping to accomplish
this important objective.

## Summary of Recommendations
## and Suggestions for Future Research

1. Institutions of higher education should encourage
the development of "collaborative" courses in the areas of
English/writing and career development. Research should be
conducted to substantiate the career development results of
this study, and investigate the effects of such an approach
on student writing.

2. Process, in addition to the particular products of
thinking, should be emphasized in career development inter-
ventions.

3. The dimension of cognitive complexity should be
included in the development of career programs.

4.   First-term career development activities should be included in any comprehensive retention program.

5.   The Perry scheme of intellectual and ethical development should continue to be researched/applied in the design and analysis of developmental instruction, particularly in career development activities.

6.   Cognitive stage and learning style appear to both play significant roles in the learning process. Because of a likely conceptual link between these two constructs, supported by the results of this study, further exploration of stage/style interaction is warranted.

7.   Student development, particularly career development, should be a component of the current outcomes assessment movement. Study results support the recommendation to include the Perry scheme in the assessment of cognitive components of the career development process.

8.   Because of the ambiguous results found in this study relating to MID Essay C, further validation research should be conducted on this subtest.

## Conclusion

In conclusion, it appears that WSACP presents a potentially effective method for addressing a number of institutional and student needs. Specifically, study results suggested that intertwining classes in writing and career

planning under the WSACP format could facilitate growth in cognitive components of career development. WSACP also appeared to have had a positive impact on student retention. This study also suggested that such an approach has the potential of improving the writing competencies of college students.

It seems evident that there is a logical connection in using student writing in English classes to help identify the structure of student thought, a la Perry, and in helping students clarify their thought processes through writing. The possibility of positively affecting the growth and maturation of those processes through the medium of writing seems a logical extension of these ideas and a promising instructional approach. In conclusion, it appears that intertwining classes in writing and career planning could be a particularly effective way of addressing student competency needs in both career and writing development. It may also be shown that the type of skills that counselors traditionally possess in the areas of communication, learning, and human development, could be positively applied to the traditional academic subject areas. This could expand and strengthen the role of counseling in the community colleges, an important consideration in an era of declining enrollments, budget reductions, and staffing cuts. From a student standpoint, it appears that the collaborative/interdisciplinary experience, as represented by WSACP, could

likely help students develop a greater understanding of the importance of education and encourage the assumption of greater personal responsibility for the learning process and a deeper sense of commitment to their college "careers".

If the two areas of writing and career development share such similar goals and concerns, then the implications to join resources and talents in the promotion of student growth appear clear.

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**APPENDIX A**

An Adaptation of The Perry Scheme
of
Intellectual and Ethical Development

Description of Positions:
Learning Perspectives
Intellectual Tasks
Career Processes
Transition Processes

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# An Adaptation of The Perry Scheme
# of Intellectual and Ethical Development

| POSITION 1: BASIC DUALITY | POSITION 2: MULTI- PLICITY PRE- LEGITIMATE | POSITION 3: MULTIPLICITY SUBORDINATE |
|---|---|---|
| **Learning Perspective:** (*) | **Learning Perspective:** | **Learning Perspective:** |
| Authorities know. and if we work hard. read every word and learn right answers all will be well. | True Authorities must be Right. the others are frauds. We re- main Right. Others must be different and Wrong. Good Authori- ties give us problems so we can learn to find the Right Ans- wers by our own in- dependent thinking. | Then some uncertainties and different opin- ions are real and legitimate temporarily. even for Authorities. They're working on them to get to the truth. |
| **Intellectual Tasks:** (**) | **Intellectual Tasks:** | **Intellectual Tasks:** |
| Learning facts. in- formation. defini- tions. simple con- cepts. | Similar to Position 1. | Students becoming increasingly aware of quan- tity. process. multiple perspectives. Have begun to distinguish between content and process. |
| **Career Process:** (***) | **Career Process:** | **Career Process:** |
| One 'right' career exists. Individual relies on external authorities to define that 'right' answer/ career. | Although Authorities (counselors/tests) should be able to provide the right answer. the possibi- lity of making a wrong decision ex- ists. This creates to potential for an- xiety. and dissonance in decision making. Minimal understand- ing/acceptance of decision-making pro- cess. | An even greater realization of the possibi- lity of making right/wrong career decisions. Potentially increasing conflict/ anxiety and a beginning recognition of the complexity of making a 'right' decision. Importance of 'self' vis-a-vis others expands in terms of decision making process. as does perceived need for critical analysis. |

| POSITION 1 | POSITION 2: | POSITION 3: |
|---|---|---|
| (CONTINUED) | (CONTINUED) | (CONTINUED) |

Transition: (*)

But what about those Others I learn about? And different opinions? And uncertainties? Some of our own Authorities disagree with each other or don't seem to know. and some give us problems instead of answers.

Transition:

But even Good Authorities admit they don't know all the answers yet.

Transition:

But there are so many things They don't know the Answers to. And They won't for a long time.

| POSITION 4: MULTIPLICITY CORRELATE OR RELATIVISM SUBORDINATE | POSITION 5: RELATIVISM CORRELATE. COMPETING.OR DIFFUSE | POSITION 6: COMMITMENT FORESEEN |
|---|---|---|

**Learning Perspective:**

(4A) Where Authorities don't know the Right Answers everyone has a right to their own opinion. no one is wrong.
   or
(4B) In certain courses Authorities are not asking for the Right Answer. They want us to think about things in a certain way: supporting opinion with data. That's what they grade us on.

**Learning Perspective:**

Then all thinking must be like this. even for Them. Everything is relative. but not equally valid. You have to understand how each context works. Theories are not Truth but metaphors to interpret data with. You have to think about your thinking.

**Learning Perspective:**

I see I'm going to have to make my own decisions in an uncertain world with no one to tell me I'm Right.

**Intellectual Tasks:**

Learning. accepting tools of critical thinking and qualitative analysis. Becoming aware of the role of supportive evidence in critical thinking and judgement. Learning to compare thought of others. of self (meta-thinking). Applying in-class learning to own lives.

**Intellectual Tasks:**

Working towards refining skills of critical analysis/ meta-thinking/applying learned concepts to related life areas.

**Intellectual Tasks:**

Acceptance of man's knowing and valuing being relative in time and circumstance: out of this realization there is a confrontation and a struggle about one's own identity. Becoming aware that if there are several legitimate contexts (truths). decisions will never be able to be justified by reason alone. Accepting the eventual need for commitment in a world where reason can only be honored by transcending it (recognizing/accepting the choice between Commitment/ abrogation of responsibility).

POSITION 4:
  (CONTINUED)

POSITION 5:
  (CONTINUED)

POSITION 6:
  (CONTINUED)

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=============================================

Career Process:

Career Process:

Career Process:

It is now conceptual-
ly possible for the
person to start en-
visioning the legiti-
macy of a range of
career choices and
approaches to the
decision making pro-
cess. This new,
diffuse, relativistic
world tasks the in-
dividual with over-
coming the instabil-
ity of self in a
constantly changing
world.

Out of a recognition
of multiple possibil-
ities, the self be-
comes the prime mover
in the decision mak-
ing process. Author-
ities (counselors),
now viewed as know-
ledgeable source, not
an unquestioned auth-
ority. Ability is
now evidenced for
detachment, self-
analysis, and a sys-
tematic examination
of alternatives.

Position 6 is a reflective stage where stu-
dent sees Authority as one who can help in
this reflective process. This reflection
involves the student in establishing ties
between career and self, confronting the
consequences of various commitments, and
confronting the reality of self-responsibi-
lity.

=====================
Transition:

=====================
Transition:

=============================================
Transition:

(4A) But some of my
friends ask me to
support my opinions
with facts and
reasons.
    and/or
(4B) In certain cour-
ses Authorities are
not asking for the
right answer; they
want us to think
about things in a
certain way, support-
ing opinion with
data. That's what
they grade us on.

But if everything is
relative, am I rela-
tive too? How can I
know I'm making the
Right Choice?

I'm lost if I don't/can't make my choices.
When I decide on my career (or marriage or
values) everything will straighten out.

POSITION 7: INITIAL
   COMMITMENT

POSITION 8:
   ORIENTATION IN
   IMPLICATIONS OF
   COMMITMENT

POSITION 9: DEVELOPING
   COMMITMENT(S)

**=====================**

**Learning Perspective:**

I've made my first
commitment! (I have
arrived.)

**=====================**

**Learning Perspective:**

I've made several
commitments. I've
got to balance them—
how many, how deep?
How certain, how
tentative?

**=========================================**

**Learning Perspective:**

This is how life will be. I must be whole-
hearted while tentative, fight for my values
yet respect others, believe my deepest values
yet be ready to learn. I see that I shall be
retracing this whole journey over and over—
but, I hope, more wisely.

**=====================**
**Intellectual Tasks:**

Integrating       the
notion that man's
knowing and valuing
are relative in time
and circumstance and
acceptance of the
responsibility of
choice and commit-
ment, and affirmation
of values.

**=====================**
**Intellectual Tasks:**

Balancing/integrating
the polarities of
tentativeness and
finality, expansion
and narrowing, free-
dom and constraint,
action and reflec-
tion.

**=========================================**
**Intellectual Tasks:**

Seeking new ways to express personal identity
through an active seeking out and processing
of information from the environment. Taking
more risks to self-concept/esteem in an ef-
fort to fully gain one's potential.

**=====================**
**Career Process:**

As one experiences
the integration of
self and career role
(the dynamic equi-
librium that expres-
ses the sense of
self), there is an
initial fear of being
confined and trapped
by the role. This
gives way to a reali-
zation that the self
defines the role,
leading to an affir-
mation of self and
career. Career focus
shifts to questions
of individual style
in acting upon, and
fulfilling the role.

**=====================**
**Career Process:**

From experiencing the
consequences of ini-
tial career commit-
ments made in Posi-
tion 7 there are new
challenges to the
definition of self
and continuation of
commitments. These
challenges involve a
reclassification of
values, purposes and
identity in terms of
career. From a chal-
lenge to affirm car-
eer identity comes
the experience of a
high degree of in-
tegration of self
with career.

**=========================================**
**Career Process:**

Similar to "Intellectual Tasks", as the in-
dividual's values, thoughts, and behaviors
(i.e. career behaviors) becomes consistent
with one another. The individual retains the
ability to remain open to new ideas and chal-
lenges at the same time that career and self-
concept fusion is occurring.

| POSITION 7: (CONTINUED) | POSITION 8: (CONTINUED) | POSITION 9: (CONTINUED) |
|---|---|---|
| ============ | ============ | ============ |
| Transition: | Transition: | |
| Why didn't that settle everything? | Things are getting contradictory. I can't make logical sense out of life's dilemmas. | |

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NOTE. (*) "Learning Perspective" and "Transition" columns are from

Cognitive and ethical growth: The making of meaning by W. Perry.

1981. In A. W. Chichering. et al. (eds.). The Modern American

College. San Francisco: Jossey - Bass. p.79. Reprinted by permission.


(**) "Intelectual Tasks" column abstracted from "A preliminary study

of cognitive stage/style interactions: The Perry scheme and the Myers-

Briggs Type Indicator" by W. Moore. 1985. CADI. Farmville. Va.


(***) "Career Process" column abstracted from "A cognitive-

developmental model of career development: An adaptation of the Perry

scheme" by L. Knefelcamp & R. Slepitza. 1976. The Counseling Psycholo-

gist. 6.(3). pp. 55-56.

APPENDIX B

Terms Related to the Perry Scheme

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Terms Related to the Perry Scheme


Perry Scheme of Intellectual and Ethical Development.
William Perry's (1970) model of cognitive developmental
growth. This model describes intellectual development as
occurring in a sequence of nine hierarchical positions in
which each position represents a qualitatively different
structure for construing knowledge (Sheese & Radovanovic,
1984). These nine positions can be organized along four
major, and sometimes overlapping dimensions of Dualism,
Multiplicity, Contextual Relativism, and Commitment within
Relativism. The progression of development is from an
absolute view of knowledge and values to a complex and
relative perspective.

Dualism. (Positions 1 and 2) Division of meaning into
two realms: Good versus Bad / Right versus Wrong / We
versus They. All that is not success is Failure, and the
Right Answers exist somewhere for every problem and Authori-
ties know them. Right Answers are to be memorized by hard
work. Knowledge is quantitative. Agency (see definitions
related to career process) is experienced as "out there" in
Authority, test scores, the Right Job. (Perry, 1980)

Multiplicity. (Positions 3 and 4) Diversity of
opinion and values is recognized as legitimate in areas
where right answers are not yet known. Opinions remain

atomistic without pattern or system. No judgments can be made among them so "everyone has a right to his or her own opinion, none can be called wrong." (Perry, 1980)

Relativism. (Positions 5, 6, and 7) Diversity of opinion, values and judgments derived from coherent sources, evidence, logics, systems, and patterns allowing for analysis and comparison. Some opinions may be found worthless, while there will remain matters about which reasonable people will reasonably disagree. Knowledge is qualitative, dependent on contexts. (Perry, 1980)

Commitment within Relativism. (Positions 7, 8, and 9) An affirmation, choice or decision (career, values, poli-tics, personal relationships) made in the awareness of Relativism (Commitments with uppercase "C" as distinct from lower case c of commitments never questioned). Agency is experienced as within the individual. (Perry, 1980)

Temporizing. Postponement of movement for a year or more. (Perry, 1980)

Escape. Alienation, abandonment of responsibility. Exploitation of Multiplicity and Relativism for avoidance of Commitment. (Perry, 1980)

Retreat. Avoidance of complexity and ambivalence by regression to Dualism colored by hatred of others.

(Perry, 1980)

APPENDIX C

Components of Dependent Variable and Rational
For Inclusion In Study

## Components of Dependent Variable and Rational
## For Inclusion In Study

| Theory | Description of Component | Rationale for Use |
|---|---|---|
| Perry scheme of Intellectual and Ethical development | The Perry scheme views intellectual development as proceeding through nine stages or positions of increasing cognitive complexity. Each position represents a qualitatively different structure for construing knowledge. The progression of development is from an absolute view of knowledge and values to a complex and relative perspective. Within this progression of growth individuals may possess slightly varying development in cognitive structure within different domains of thought. such as "career" (Harvey. Hunt. & Schroder. 1961). | Chosen for use in this study essentially because of a philosophical agreement with Perry's contention that such dimensions as responsible. self-determined behavior. and committed and mature choice are strongly related to the ability to think critically in a relative world devoid of absolute truth and knowledge. It is felt that this ability to think critically in such a world is an essential underlying factor in the process of making congruent and satisfying career choices with any kind of meaningful commitment. The evolution of such a commitment in the conceptual domain of career (or any other domain) can best be understood from a framework of intellectual development (Brabeck and Welfel. 1985: Broughton. 1978: Edelstein and Noam. 1982: Fischer. 1980: Kitchner and King. 1981: Labouvie-Vief. 1982: Noshman and Timmons. 1982). |

Perry's cognitive paradigm was also chosen because it appears to be the most highly developed and researched cognitive-developmental model (Moore. 1985). Additionally. the Perry model was derived from an environment (higher education) similar to that of the present research study.

| ============ | ====================== | ================================== |
| --- | --- | --- |
| **Instrument** | | |
| | Assesses that part of the | Currently the most widely used and |
| Measure of | Perry scheme believed to be | best researched instrument for the |
| Intellectual | primarily cognitive/ intel- | assessment of the intellectual |
| Development | lectual (Perry positions 1- | dimension of the Perry scheme |
| (MID) | 5). The MID is a cognitive | (Moore. 1985). |
| | task comprised of several | |
| | semi-structured. open-ended | |
| | essays designed to reflect | |
| | (generate) the writer's | |
| | underlying cognitive struc- | |
| | ture (complexity) as that | |
| | structure relates to the | |
| | specific essay topic (concep- | |
| | tual domain) in question | |
| | (Moore. 1985). | |

| ============ | ========================= | ================================= |
| --- | --- | --- |
| | **Description of Component** | **Rationale for Use** |
| Instrument | The two MID essays being | Two measures of cognitive complexity |
| Subtests | utilized are not really | (MID essays A and C) were selected |
| | subtests . but can indepen- | for use in this study to reflect the |
| | dently assess cognitive | possibilty that an individual. as |
| | structure as that structure | Harvey et al. (1961) have proposed. |
| | relates to the specific essay | can possess slightly varying devel- |
| | topic (conceptual domain) in | opment in cognitive structure in |
| | question (Moore. 1983). | different conceptual areas or |
| | | domains. Also. one implication of a |
| | | stage development model such as |
| | | Perry's is that when an advancement |
| | | in cognitive structure or level of |
| | | thinking is advanced in one environ- |
| | | ment there is a positive effect on |
| | | the general process. which. in turn. |
| | | effects other conceptual areas |
| | | (Sheese and Radovanovic. 1984). |

▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄▄    ×××××××××××××××××××××××    ×××××××××××××××××××××××××××

| Dependent Variables | | |
|---|---|---|
| Essay A | Assesses cognitive structure or complexity in terms of a student's 'general process' for construing knowledge and learning. | Best researched MID essay and most frequently used protocol for the purposes of determining 'pure Perry position'. |
| Essay C | Assesses cognitive structure or complexity within the specific conceptual domain of career. | Particular orientation of essay C relates directly to the focus of the present study and it has been hypothesized (Kurfiss, 1977) that students are likely to exhibit more advancement in conceptual areas in which there is persistent engagement. |

**APPENDIX D**

Course Outline:  Career Development Component

Course Outline


I.  CONCEPT: Career and Career Themes

    Activity A: Biography of a Working Person Essay

    Activity B: What Makes Up a Career?

    Activity C: The Origin of Values

    Activity D: Essay: Personal Definition of Work and

               Career


II. CONCEPT:  Values and Needs:  Exploration Through Writing

             and Fantasy


    Activity A:  Fantasy Character Inventory - "The Perfect
Life" - Small Group Writing Project/Essay (Groups are
selected/formed according  to MBTI Temperament Type: SJ, SP,
NF, NT)

    Activity B:  Fantasy Character Inventory - "The Perfect
Life" - Individual Essays

    Activity C:   Values  and  Needs:  Understanding MBTI
Temperament Types

    Activity D:  Introduction to the 12 Department of Labor
(DOL) Career Areas and 66 Worker Trait Groups

    Activity E:  Relating MBTI Temperament Type (Values) to
the 66 Worker Trait Groups on the Personal Profile Sheet

III. CONCEPT: Career Interests and Attitudes:  A Key to Self

Understanding


Activity A:   Interest  Essay: Expanding and Clarifying an  Interest  through  Writing  ("See,  You  Really  Do Have Interests")

Activity B:   Relationship of Interests with the Career Components of: Occupation, Education,  Civic, and Education- Writing Exercise

Activity C:   Relating  Interests to  the World of Work and the 12 DOL Career Areas - Writing Exercise

Activity  D:   Relating  Work Activities Preference Checklist  and Work Situations Preference Checklist to the 66 Worker Trait Groups on the Personal Profile Sheet

Activity E:   Expressed  Interests:  Relating Expressed Interests  to  the  66  Worker  Trait Groups on the Personal Profile Sheet

Activity F:   Relating  Interests and  Attitudes to the World of  Work - Introduction to the Six Career Environments of the Strong Campbell Interest Inventory (SCII)

Activity G:   Relating  "Tested"  Interests  (from SCII Assessments) to  the 66  Worker Trait Groups on the Personal Profile Sheet

IV. CONCEPT: Career Aptitudes


    Activity A: Work Situation Preferences: Aptitudes Index

    Activity B: Relating Aptitudes  to the  66 Worker Trait
Groups on the Personal Profile Sheet


V.  CONCEPT: Putting It All Together


    Activity  A:  Introduction  to  a  Career Information
Delivery System: Learning to Use the  Guide for Occupational
Information and the Occupational Outlook Handbook

    Activity  B:  Exploring  Two  Tentative Career Choices:
Linking Choices to  a  Career  Information  Delivery System-
Writing Exercise

    Activity C: Self-Assessment Essay

APPENDIX E

WORKSHEETS/ACTIVITY SHEETS
FOR
CAREER DEVELOPMENT COMPONENT

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CONCEPT I:  ACTIVITY B

Activity

Select two  of the following quotes that are closest to your
own definition of work.   Use  these quotes  to develop your
own "Personal Definition of Work and Career."

Quotations:

1.   Without work  all life  goes rotten.    But when work is
     soulless, life stifles and dies.

                         -  Camus

2.   Work is work.  Nobody likes it; it just has to be done.
     We must all do our share.

                         -  Unknown

3.   Work is love made visible.

                         -  Gibran

4.   Man's right  to work  is the right to be bored for most
     of his natural life.

                         -  Neville

5.   Self-actualizing people assimilate their  work into the
     identity,  into  the  self,  i.e. work actually becomes
     part of the self,  part of  the individual's definition
     of himself.

                         -  Maslow

6.   Work is  any activity that is required of you:  school,
     occupation, housework, etc.

                         -  A college student

7.   The worker feels himself at home  outside his  work and
     feels absent  from himself  in his  work.   He feels at
     home when he is not working, and not at home when he is
     working.   His work  is not  freely consented to, but is
     constrained, forced labor.  Work is  thus not  a satis-
     faction of  a need  but only  a means  to satisfy needs
     outside work.
                         -  Karl Marx

8.   Work is life.
                         -  Unknown

CONCEPT I:  ACTIVITY B

Worksheet


Definition of Work Related Terms:

Work.  Any required activity.

Position.  A set of tasks performed by a person within a particular organization.

Job.  A group of similar positions in one place or locations.  However, job is used in this book (as it is generally) to refer to the particular position a person holds or the particular kind of work done for pay in that position.

Occupation.  The kind of activity needed to perform work tasks.  The tasks involved are similar from situation to situation.  For example, the occupation of bricklayer contains essentially the same tasks, no matter whether the bricklayer is working for a construction company or a manufacturing firm.

Vocation.  Like occupation, but broader in scope.  it is used to convey a sense of life mission or purpose.

Career.  The sequence of occupations, jobs, and positions held during the course of a person's lifetime.  However, the National Vocational Guidance Association has pointed out that such a definition coneys no sense of an active person interacting with the environment.  Their definition of career is a "time-extended working out of a purposeful life pattern through work undertaken by the individual."  Such a definition better fits the way career will be used in this course.

Career Theme - the over-riding principle that gives structure and meaning to work and the sequence of one's work experiences, including education and training.  The principle is made of a person's values and pattern of values. When projected into the future, this principle constitutes the basis for one's Career Goal. A career theme expresses one's purpose and serves as a guide for both interpreting current experiences and anticipating future experience.

CONCEPT I:  ACTIVITY C

WORKSHEET ONE

PSYCHOLOGICAL NEEDS

Psychological needs are also called "acquired" needs because they are learned from others.  Eight examples of psychological needs will be briefly described; although there are many more.

1.  Affection and companionship.  Everyone has  the need to be with  someone else  at one  time or  another and to share experiences.  Relationships with family and  friends provide the basic satisfaction of living for most people.

2.  Approval.  Closely related to the need for affection is the need for  approval.  People  want  to  be  accepted by others and "to belong".

3.  Independence.  People have  a need to act on their own and be responsible for themselves.

4.  Self-respect.  Besides being accepted by  others, people need to accept themselves.  They have to like themselves.

5.  Recognition.  Much of human behavior is concerned with getting recognition from others in some way.  One way  is to obtain  high  rank  or  position  in a group,  as can be seen among members of military or business.

6.  Prestige.  The need  for recognition;  the need  to feel superior to other persons with whom we compare ourselves.

7.  Power.  The need  for power is similar to the need for prestige.  Some of  us ignore  prestige yet  want power over other people.  An example is the professional politician who does not hold public office  but  "pulls  the  strings" that move the officeholder.

8.  Security.  The  need  for  security involves wanting protection against the loss of status,  friends,  loved ones, property, or income.

9.  Achievement or  mastery over situations, people, ideas, machines.

10.  Creativity.  The need  to express  oneself creatively. The need to share one's inner self with the outside world.

CONCEPT I: ACTIVITY C
WORKSHEET TWO

For many people, work defines much of their basic identity.
Everyone works, whether for pay, volunteer, or at home and
for a variety of reasons. Whether work is the major driving
force in a person's life or just a part of a person's
existence, it is important, particularly in our work-
oriented society. Part of the basis of its importance can
be seen in Maslow's hierarchy of needs, which are presented
below.

|  |  |
|---|---|
| Self-Actualization | Level 5. |
| Self Esteem | Level 4. |
| Love and Belonging | Level 3. |
| Security | Level 2. |
| Physiological Needs | Level 1. |

Most people must work in order to achieve the basic needs in
levels one and two. A person must have these needs ful-
filled in order to work on achieving the needs at the higher
levels. If a person has a sufficient income, physiological
and security needs can be satisfied. A person's work
enables her or him to associate with other people and to
maintain a family, thus contributing to the fulfillment of
the needs in level three.

As a person begins to fulfill needs in level four, self-
esteem, work takes on even more importance. No longer does
work simply provide an income and inter-personal associa-
tions. For a person to achieve self-esteem, it is
important to develop a sense of confidence, mastery, and
achievement in one's life. One gains the respect and
appreciation of others for one's accomplishment and a
certain measure of status is achieved. For many people, the
primary source of the development and achievement of self-
esteem is their work.

CONCEPT I: ACTIVITY C
Worksheet Two continuation


If the needs in levels one through four have been substan-
tially fulfilled, a person begins to satisfy the need for
self-actualization. This is a difficult need to define, as
it varies from person to person and deals with a person's
concept of having a purpose, or mission, in life. In order
to achieve a level of self-actualization, one needs to work
toward realizing one's potential. Many people begin to
reach toward fulfillment of their potential through their
work. This need is illustrated by the many thousands of
independently wealthy persons who work very hard and are
very involved in their work, even though they do not have
to work for financial reasons.

CONCEPT II:    ACTIVITIES A & B

Fantasy Character Inventory

You are going to create a fantasy character, one whose lifestyle seems ideal to you. The first step will be to go through this list of attributes of your fantasy character and respond to each question in writing.

You must respond to all the questions.  If you have additional attributes/characteristics that you would like to add, feel free to do so.

Before you work through this inventory, create your fantasy character, decide if your character is male or female, tall or short, loud or quiet, plump or thin, etc. Write a one paragraph description of your character, including name, physical appearance, age, where he/she lives, how many brothers and sisters, etc.  Do that here.  After you describe and name your character, go on to respond to the inventory below. Don't worry about space.  As you write, the computer will create new lines for you to write on.

A.  Occupation:

Career Area   - give your character's job title and career area.

Does your character work in a large or small company or alone?

Is your character his/her own boss, does he/she supervise others, or work independently?

Are your character's job duties routine or diverse?

Is your character's job high or low pressure?

Is there opportunity for rapid advancement in your character's company or organization or is this a relatively "stable" career?

How does your character feel about the opportunities for advancement, or the lack of them?

Does your character sit at a desk, or work on his/her feet?

Does the job involve a lot of travelling?

Does the job require mental or physical skills or a combination of both?

Does your character have job security? Is this important to him/her?

How much money does your character make? Is money the most important thing in the job?

What are the job's hours?

Does your character work weekends and/or bring work home?

Is the job primarily connected to helping people, using ideas, or developing products?

Is this career a major driving force in your character's life, or just a part of it?

Describe the place where your character works. What do the office or building and surroundings look like? Does your character work in the country, in the suburbs, or in the city? Does he/she work indoors or outdoors?

Does the job give your character a lot of free time? Vacation time? Does he/she work 9-5 or flex-time?

Is the job title important to your character?

Does your character's company or organization have a clear-cut hierarchy (responsibilities and authority for each position clearly outlined)? Does this matter to your character?

Does your character want the company or organization to be doing something he/she finds extremely important? Does he/she have a strong compulsion to "serve" the company?

How important is duty or responsibility to your character?

Is your character free to do what he/she wants when he/she wants? (Does your character's position allow him/her to follow through on impulses, ideas, urges?)

Does this job involve crisis situations or situations where the outcome is not known, or is it relatively stable?

Does your character's job allow him/her to have an identity uniquely his/hers? Is this important?

Does the job involve people (relationships and interactions), ideas, tools (computers or machinery, etc.), or communication skills (written or spoken)?

Does your character really get into his/her work? Does he/she devote huge amounts of time to this work?

Which phrase describes best what your character's position can give him/her? (Choose only one). Explain why this phrase is the best for him/her.

A sense of mastery, competence?

Work allows him/her to make a difference in the world.

Work must allow him/her to be free, and not tie him/her down or obligate him/her, but allow him/her freedom to follow his/her own ideas.

He/she must belong to a company/organization that is greater" than himself/herself and allow him/her to serve this greater ideal.

B. Leisure and Avocational Interests

Do your character's "outside" activities include the desire to be "useful" to clubs, organizations, religious groups or service clubs?

Is it important that your character pick hobbies and avocations that allow him/her to develop a sense of mastery (competence)? (In other words, is play a serious matter to him/her?)

Do your character's avocational (non-paying) activities have to have a special meaning and significance, or will he/she just like to have fun?

Is it important that your character's avocational (non-paying) activities be "spontaneous," that is, allow him/her to do whatever he/she feels the urge to do when he/she wants to do it, or will these activities be a serious, carefully planned part of his/her life?

What kind of sports is your character involved in? Why?
What kind of hobbies is he/she involved with? Why?

Friends: How important are they, what kind, how many, and what does your character do with his/her friends?

Does your character have a flower or vegetable garden? Which?

Does your character have time to be alone? How important is this to your character? What does he/she do when alone?

Does your character work on projects around the house? What kind?

Does your character like movies, plays, concerts? What other activities? Arts and crafts?

What other kinds of activities will your character be doing?

What does your character do on weekends?

What does your character do on vacations?

Does your character have a lot of leisure time? Is this important?

How important is health to your character? What does he/she do about it?

Does your character like to do new things - go to new places, meet new friends, or is he/she interested in a more limited and select number of activities, hobbies and friends?

Does your character have a lot of interests outside of paid work activity or just a few?

C.  Homelife, Lifestyle, and Personal Values

Is your character married or single? How important is intimacy to him/her?

Does your character have children? Large or small family?

Does your character live in an apartment or a house? Is it large or small? Is there a lot of land around it?

Does your character live close to neighbors or far away?
Does your character want to spend time with neighbors?

Describe where your character lives. Is it in the country, suburbs, city? Is it wooded? Is it by water or in the mountains?

Does your character live close to cultural/entertainment opportunities?

Does the place where your character lives have a warm climate? Does the weather change by season?

Does your character live near family, relatives or friends?

Does your character have a lot of non-work interests? Does he/she have the time to pursue them?

Does your character have a vacation or second home?

Does your character participate to a great extent in family oriented activities? What are they?

Does your character do things alone or with a spouse or friends?

Would your character like a life with many changes or a stable one?

Fantasize that your character is given $200,000 a year, tax free. Would he/she work? How would his/her life change?

What kind of "moral" values are important to your character?

Could your character pick up and move, severing social ties, easily or not so easily?

Does your character's lifestyle involve a "hunger" for interaction with other people or for new relationships?

Does your character's lifestyle involve spending a lot of time belonging to a lot of organized activities, clubs, etc.? How important is this to your character? Why?

Is your character's lifestyle geared to gaining competence (mastery) of a lot of activities; is his/her lifestyle geared to "self-improvement"?

D. Educational Interests

How important is education to your character?

Is your character a "lifelong learner" - seeking both formal and informal educational experiences throughout life?

What kind of subjects/courses did (or will) your character prefer?

What kind of subjects/courses did (or will) your character dislike?

What kind of degree "level" is important for your character to attain? Why is this level important for him/her to attain?

    Examples:
Certificate Program - (1 year - technical)
A.A.S. - Associate/Technical (2 year non-transferable)
A.S. or A.A. - Associate (2 year - transferable)
B.A. or B.S. - Bachelors (4 year)
M.A. or M.S. - Masters (1 to 2 years beyond B.A. or
    B.S.)
Ph.D. - Doctorate (usually 3 - 5 years full time study
        beyond B.A. or B.S.; highest degree in field)

Did (or would) your character prefer to go right from high school to college, or would he/she prefer to gain life experience before formal higher education?

Is a college degree important to your character to be "accepted"?

Is (or has) your character been a good student and really enjoyed going to school, or is college primarily a means to an end?

Does your character believe that college is "the road to success"?

If your character decided not to go to college, what were his/her reasons?

Community

Is a sense of community important to your character?

Would your character like to "sink roots" or is he/she more interested in "seeing the world"?

Is your character interested in "giving of him/herself" in volunteer work? What kind does he/she do?

Is your character active in a religious group? What part does religion play in his/her life?

What other groups does he/she belong to?

Will your character be involved in trying to make social changes?  What kind?

Is your character politically active?

CONCEPT III:   ACTIVITY B

WORKSHEET


List all of your activities in the space provided.

OCCUPATION




EDUCATION




CIVIC & COMMUNITY




HOME AND FAMILY

CONCEPT III:   ACTIVITY C
WORKSHEET

---

**EXAMPLE**

Career Area 01:   ARTISTIC - Interest in creative expression of
testing or ideas.

-Conducted children's workshop for the Community Players.
Directed the children's acting at rehearsals and enjoy thinking of
ideas for the stage props.
-Pottery class; would like to be summer camp counselor in charge of
arts and crafts.
-Help brothers and sisters make papier-mâché puppets.
-English course; writing essays.

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Career Area 01:   ARTISTIC   - Interest in creative expression
of feelings or ideas.

Career Area 02:   SCIENTIFIC   -   Interest in research and
collecting data  about the  natural world  and applying this
data to problems in medical, life, or physical sciences.

Career Area 03:   NATURE - Interest in activities involving
the physical care  of  plants  and  animals,  usually  in an
outdoor setting.

CONCEPT III:  ACTIVITY C
Worksheet Continuation

Career Area  04:  AUTHORITY - Interest in using authority to
protect people and property.

Career Area 05:  MECHANICAL - Interest in  applying mechani-
cal principles to practical situations, using machines, hand
tools, or techniques.

Career  Area  06:    INDUSTRIAL  -  Interest  in repetitive,
concrete, organized activities in a factory setting.

Career Area  07:   BUSINESS DETAIL  - Interest in activities
requiring accuracy and attention to details, primarily in an
office setting.

Career Area 08:  PERSUASIVE - Interest in influencing others
through sales and promotion techniques.

Career Area 09:  ACCOMMODATING - Interest in catering to and
serving  the  desires  of  others,  usually  on a one-to-one
basis.

CONCEPT III:  ACTIVITY C
Worksheet Continuation

Career Area 10:  HUMANITARIAN - Interest in  helping indivi-
duals  with  their  mental,  spiritual,  social,  physical,  or
vocational concerns.


Career Area 11:  SOCIAL-BUSINESS -  Interest in  leading and
influencing  others  through  activities involving verbal or
numerical abilities.


Career Area 12:  PHYSICAL PERFORMING - Interest  in physical
activities performed before an audience.


3. Review the list of
   activities you wrote in
   Step 2.  Select the two
   Career Areas in which
   you are most interested.

a. Was the selection easy
   or difficult?

b. Do you like activities
   in more than two areas?

c. Why are the areas you
   selected the most
   important to you?

Concept II, Activity E
Concept III, Activites D, E, & G
Concept IV, Activity B

| Areas and Worker Trait Groups | Expressed Interests / Career Interest / Activity B | Interests / Work Activites / Activity C | Interests / Work Situations / Activity D | Aptitudes / Aptitudes Activity E / + | Tested Interests / Strong Campbell | Tested Values / Myers Briggs |
|---|---|---|---|---|---|---|
| **01: ARTISTIC** | | | | | | |
| 01.01 Literary Arts | | 5, 6, 8 | 3,4,5,7,9 | | | |
| 01.02 Visual Arts | | 6, 8 | 3, 4, 7, 9 | | | |
| 01.03 Performing Arts: Drama | | 5, 6, 8 | 3, 4, 7, 9 | | | |
| 01.04 Performing Arts: Music | | 5, 6, 8 | 3, 4, 7, 9 | | | |
| 01.05 Performing Arts: Dance | | 5, 6, 8 | 3, 4, 7, 9 | | | |
| 01.06 Technical Arts | | 1, 9, 10 | 7, 8, 10 | | | |
| 01.07 Amusement | | 2, 6 | 4, 5, 7, 9 | | | |
| 01.08 Modeling | | 3, 6 | 4, 9 | | | |
| **02: SCIENTIFIC** | | | | | | |
| 02.01 Physical Sciences | | 1, 6, 7, 8 | 7, 8 | | | |
| 02.02 Life Sciences | | 1, 6, 7, 8 | 7, 8 | | | |
| 02.03 Medical Sciences | | 4, 5, 7 | 4, 7, 8, 10 | | | |
| 02.04 Laboratory Technology | | 1, 7, 9 | 8, 10 | | | |
| **03: NATURE** | | | | | | |
| 03.01 Managerial Work: Nature | | 1,2,7,9,10 | 1,3,4,7,8 | | | |
| 03.02 General Supervision: Nature | | 5, 9 | 1,3,4,7,8 | | | |
| 03.03 Animal Training and Care | | 3, 4, 6 | 1, 4, 7, 8 | | | |
| 03.04 Elemental Work: Nature | | 1, 3, 9 | | | | |
| **04: AUTHORITY** | | | | | | |
| 01.01 Safety and Law Enforcement | | 2, 5, 6 | 1,3,4,6, | | | |
| 04.02 Security Services | | 2, 3, 6 | 4, 6, 7 | | | |

PERSONAL PROFILE SHEET

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| PAGE TWO | Expressed Interests | Interests | Interests | Aptitudes | Tested Interests | Tested Values |
|---|---|---|---|---|---|---|
| Areas and Worker Trait Groups | Career Interest Activity B | Work Activites Activity C | Work Situations Activity D | Aptitudes Activity E (+ / –) | Strong Campbell | Myers Briggs |
| **05: MECHANICAL** | | | | | | |
| 05.01 Engineering | | 1,2,6,7,8, | 1, 4, 7, 8 | | | |
| 05.02 Managerial Work: Mechanical | | 2,5,6,7,9 | 1,3,4,7,8 | | | |
| 05.03 Engineering Technology | | 1, 7, 9 | 7, 8, 10 | | | |
| 05.04 Air and Water Vehicle Operation | | 1, 5, 9 | 3,4,6,7,8,1 | | | |
| 05.05 Craft Technology | | 1, 9, 10 | 1, 7, 8, 10 | | | |
| 05.06 Systems Operation | | 1, 9 | 1, 3, 8, 10 | | | |
| 05.07 Quality Control | | 1, 3, 9 | 7, 8, 10 | | | |
| 05.08 Land Vehicle Operation | | 1, 3, 9 | 8 | | | |
| 05.09 Materials Control | | 1, 2, 3, 9 | 4, 8, 10 | | | |
| 05.10 Skilled Hand and Machine Work | | 1, 3, 9, 10 | 8, 10 | | | |
| 05.11 Equipment Operation | | 1, 3, 9 | 8, 10 | | | |
| 05.12 Elemental Work: Mechanical | | 1, 3, 9 | 8, 10 | | | |
| **06: INDUSTRIAL** | | | | | | |
| 06.01 Production Technology | | 1, 9, 10 | 3, 4, 8, 10 | | | |
| 06.02 Production Work | | 1, 3, 9 | 10,2,3,4,8,10 | | | |
| 06.03 Production Control | | 1, 3, 9 | 10,2, 8, 10 | | | |
| 06.04 Elemental Work: Industrial | | 1, 3, 9 | 10,2, 10 | | | |
| **07: BUSINESS DETAIL** | | | | | | |
| 07.01 Administrative Detail | | 2, 5, 6 | 1, 4, 7, 8 | | | |
| 07.02 Mathematical Detail | | 1, 2, 3, 9 | 2, 8, 10 | | | |
| 07.03 Financial Detail | | 1, 2, 3 | 4, 8, 10 | | | |
| 07.04 Info. Processing: Speaking | | 2, 3, 6, 9 | 1, 4, 8 | | | |
| 07.05 Info. Processing: Records | | 2, 3, 6 | 4, 8, 10 | | | |
| 07.07 Clerical Handling | | 1, 3 | 8, 10 | | | |
| **08: PERSUASIVE** | | | | | | |
| 08.01 Sales Technology | | 2, 5, 6, 7 | 4, 5, 7, 8 | | | |
| 08.02 General Sales | | 2, 6 | 4, 5, 7, 8 | | | |
| 08.03 Vending | | 2, 3 | 4, 5 | | | |

PAGE THREE

| Areas and Worker Trait Groups | Expressed Interests / Career Interest / Activity B | Interests / Work Activites / Activity C | Interests / Work Situations / Activity D | Aptitudes / Aptitudes / Activity E | Tested Interests / Strong Campbell | Tested Values / Myers Briggs |
|---|---|---|---|---|---|---|
| **09: ACCOMMODATING** | | | | | | |
| 09.01 Hospitality Services | | 2, 5, 6 | 1, 3, 4, 7 | | | |
| 09.02 Barbering and Beauty Services | | 2, 8, 9 | 1,4,7,8,10 | | | |
| 09.03 Passenger Services | | 2, 3, 9 | 4, 7, 8 | | | |
| 09.04 customer Services | | 1, 2, 3 | 4 | | | |
| 09.05 Attendant Services | | 2, 3 | 4 | | | |
| **10: HUMANITARIAN** | | | | | | |
| 10.01 Social Services | | 4, 5, 6, 8 | 1, 3, 4, 7 | | | |
| 10.02 Nursing and Therapy Services | | 4, 6, 7 | 1,4,7,8,10 | | | |
| 10.03 Child and Adult Care | | 2, 3, 4 | 1,4,7,8,10 | | | |
| **11: SOCIAL/BUSINESS** | | | | | | |
| 11.01 Mathematics and Statistics | | 6, 7, 9 | 3, 7, 8 | | | |
| 11.02 Educational & Library Services | | 2, 4, 5, 6 | 1, 3, 4, 7 | | | |
| 11.03 Social Research | | 6, 7, 8 | 1, 4, 7, 8 | | | |
| 11.04 Law | | 2, 5, 6, 8 | 1,4,5,7,8 | | | |
| 11.05 Business Administration | | 2, 4, 5, 6 | 1, 3, 4, 7 | | | |
| 11.06 Finance | | 1,2,5,6,7,9 | 4, 7, 8 | | | |
| 11.07 Services Administration | | 2, 4, 5, 6 | 1, 3, 4, 7 | | | |
| 11.08 Communication | | 2, 4, 5, 6 | 1, 3, 4, 7 | | | |
| 11.09 Promotion | | 2, 5 6 | 1,3,4,5,7 | | | |
| 11.10 Regulations Enforcement | | 2, 5, 6 | 1,3,4,5,7 | | | |
| 11.11 Business Management | | 2, 5 | 1,3,4,7,8 | | | |
| 11.12 Contracts and Claims | | 2, 5, 6 | 1,3,4,7,8 | | | |
| **12: PHYSICAL PERFORMING** | | | | | | |
| 12.01 Sports | | 5 | 4,5,6,7,8 | | | |
| 12.02 Physical Feats | | 9 | 6, 7 | | | |

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APPENDIX F

Theoretical Underpinnings of

Major Course Activities

## Theoretical Underpinnings of

## Major Course Activities

This appendix overviews the development of major course activities in WSACP, and ties these activities to specific theoretical foundations reviewed in Chapter 2.

The goal of the initial course unit, Concept I: Career and Career Themes (refer to course outline in Appendix D) was to help students broaden their conceptualization of career. This unit introduced, through select writing activities, the idea of career as a developmental process and not a singular decisional "event". The primary focus of this unit was on individual growth with respect to work, as opposed to an "occupational requirement" focus. This emphasis on individual growth had, as an outcome objective, students' initiating perceptions of career that included the importance of education, and the understanding that "career" includes the sequence of jobs, responsibilities, and activities held throughout life. The emphasis was on career as the totality of a person's work activities, paid and unpaid (AEL, 1980).

The initial writing assignment of this unit was entitled "Biography of a Working Person Essay". Students were asked to select someone and inquire how that individual had expressed himself/herself throughout life in the way of work. From this interview students were asked to compose a

500 word essay. As a result of interacting with both classmates and related writing activities, the first draft was revised and rewritten at the end of the unit on career concepts.

Students shared their first draft research with classmates to investigate the following areas:

Career patterns - (or lack of) in interviewed subjects. In classroom discussions students investigated whether career patterns discovered in the interviews could be linked to the individual's underlying values or goals.

Career "themes" - could they link a person's past or present in some meaningful way?

An important rationale for "Biography of a Working Person Essay" was to help students focus on the need for understanding change and its effects on one's personal and professional goals. Understanding and managing change are critical components of career decision making and life planning (Mackes & Biedler, 1983). From reviewing the lives and careers of others it was hoped that students would gain valuable information and insight into their own developmental processes.

According to Sanford's (1966) notion of challenge and support, the idea of career as relative and changing would likely be viewed by students as a potential threat to ego identity. Perry (1970) indicates that most entering college

freshmen are at a cognitive position somewhere between levels 2 and 3 of the Perry scheme. These positions are characterized by a fairly simple right-wrong cognitive structure. In the area of vocation, students at these positions have the general perception that only one right career exists and that "authorities" know what that right answer is (the answer lies outside of the individual). These writing and discussion activities, therefore, could potentially be viewed as a threat to ego-integrity, as they were designed to involve the student in a progressive modification of this absolutistic right/wrong outlook and to introduce the world as relativistic, i.e., people have many "jobs", and a variety of jobs can be seen as "right". Also, presenting the linkage of individual values with career patterns as an underlying basis for decision making intro-duces the idea of personal responsibility in career plan-ning.

These interviews/essays, then, were expected to high-light human behavior as constantly changing and evolving. This notion contradicts the ideas of students at cognitive levels 2 and 3; i.e., that "adults are born knowing what they want to do". According to Perry (1981), an important stimulus to human development is the internal struggle of the individual to "conserve" the self while simultaneously desiring to progress, or grow. If students are confronted

with the idea that adults were not born "knowing", and that valuing constantly changes, even as an adult, then they are also being introduced and confronted with the idea of personal responsibility and individual control of their own lives.

At this level of cognitive development, freshman students often place responsibility for career decisions and college major on academic advisors or on a somewhat artificial outline provided by the arbitrary selection of a college major. The hope is that somehow the matching of program and career will miraculously occur. Confrontation with the concept of personal responsibility is in line with Perry's idea that development is brought about by the realization of loss (the loss of authorities, and absolute truths) and the concomitant process of learning how to affirm responsibilities in a world now seen as flawed.

The concepts involved in "Biography of a Working Person Essay" were purposefully introduced through the lives of other people, outside, or peripheral to the lives of the students themselves. Psychologically and intellectually, freshman students are at stages of development that theoretically inhibit an understanding of these concepts through self-analysis or self-awareness. At the early cognitive positions in the Perry scheme, detachment, or the ability to meta-think, is lacking, making awareness of self extremely

limited (Perry, 1970). Generally, awareness and self-concept at this level of development are constructs developed from interactions with others and the psychological mechanisms of introjection (swallowing whole personality parts of significant others and accepting them as one's own) and projection [understanding others through the projection of introjected parts]. Students at this level of development, then, tend to see themselves and their world primarily through the eyes of other people, and have limited access to deeper levels of self-awareness.

As students confronted the developmental issues introduced in "Biography of a Working Person Essay", and the subsequent related writing activities, "What Makes Up a Career?", and "The Origin of Values", it was believed that a concomitant challenge to the students' current view of the world was also presented. To the extent that this challenge to ego-identity was met, it was believed these activities would help facilitate a modification of absolutistic thinking, and help make room for the more relative outlook that Perry (1970) defines as Multiplicity. Ensuring that students will take up this challenge is seen by Sanford (1966) as a function of providing adequate psychological support. This was attempted in this first unit (and throughout the entire course) by providing developmental activities and intellectual tasks more in line with a

Position 2 or 3 cognitive structure. Primary intellectual tasks at these positions involve learning information, definitions, and simple concepts (see Appendix A). Information and definitions were provided, discussed, and emphasized throughout the first unit (see worksheets in Appendix D, Activity 3: "Definition of Work-Related Terms" and the definition sheet on "Psychological Needs"). It was hoped that as students clarified, in writing, the final drafts of their own definition of work and career (see Activity 4, Concept I, in Appendix D) that the co-emphasis on learning information and simple concepts provided enough support so that the developmental challenge would be accepted.

The direction and activities of this initial unit were also developed from a theoretical perspective supplied by Tiedeman's notions of Differentiation and Integration. Differentiation is triggered by the individual experiencing a problem and a concomitant awareness of discomfort, requiring resolution through the decision process. The "problems" that were purposefully introduced in the writing activities of this unit were: (a) there may not be one right answer for the question of career in a changing and relative world (a variety of careers may be seen as "correct"); (b) adults are not born with knowing what they want to do; (c) work patterns and the meaning of work and career can be related to an individual's underlying value structure and therefore,

(d) the students themselves may be responsible for choice in a relative and complex world devoid of absolute truths or answers.

Stimulating awareness of the "problem of responsibility" was viewed as way of facilitating student entry into the first step of Tiedeman's Aspect of Anticipation, the Exploration phase. "Exploration is the earliest awareness of the problem stage; the individual becomes aware that a problem does or will exist and that a decision is necessary for problem resolution" (Tiedeman & O'Hare, 1963, p.38). It is in this context of problem awareness that, according to Tiedeman, a number of alternatives or possible goals will begin to be considered.

The largest percentage of this course, in terms of teaching and writing time, was devoted to Concept II: Concept of Values and Needs: Exploration through Writing and Fantasy. This unit continued the introduction of the importance of needs and values in the decision making process. Further, the identification and description of values as a way of helping one recognize and select new experiences was emphasized. In this unit students wrote about life and work values via a fantasy character. Fantasy was used to again keep the emphasis "external" to the students' own life. It was believed that writing through fantasy would permit greater freedom for values exploration

and mitigate narrow-focus blockage typically found in this age-stage development group. Perry (1970) discussed the interlocking relationship of learning and self-concept, and the possibility that the learning environment could be ego-threatening. It was believed this threat was amplified because the subject of learning in this course was the self. The approach of writing via a fantasy character -- keeping the career process somewhat external to the student -- was based upon this understanding of the ego-threatening nature of learning. It was believed, then, that "external" exploration via a fantasy character would stimulate sufficient "safe" exploration to later allow synthesis (application of concepts to the self), at a level required for adequate career decision making and planning.

Fantasy was also incorporated into WSACP to encourage the type of development that Tiedeman views as important in the initial stages of the career process. According to Tiedeman (1961, 1963), the initial stage of Exploration is normally characterized by the individual's conception of career premises or situations through the use of imagination and fantasy. One objective of this unit was to take advantage of this aspect by encouraging and expanding this normal aspect of human career development. Using fantasy to explore values, and the writing process to deepen that exploration, was viewed as way of probing and clarifying

underlying values, feelings, and ideas that fantasy may symbolize. It was believed that this process could produce a rich reservoir of source material through which meaning could later be organized and structured.

Tiedeman remarks that the "transitory, highly imaginary or even fantastic ruminations [that characterize the Exploratory phase] may not necessarily be related to one another. "[These fantasies] may be a relatively unassociated set of possibilities and consequences" (Tiedeman & O'Hare, 1963, p.41). The hypothesis proffered here is that there may be more of a connection between Exploratory phase fantasies than Tiedeman initially suspected. The connections (linkage) between fantasies, as well as the fantasies themselves, could represent an underlying, perhaps hidden, value structure that could possibly be revealed using the expanded awareness and articulation potential of the writing process. The preferred outcome of this process, then, was to clarify and amplify "imagination" to the point where patterns and linkages between fantasies could be detected.

As mentioned previously, students in Perry positions 2 and 3 are characterized by (a) limited self-awareness; (b) sense of self defined by others -- a resultant of the way others see or characterize a person; (c) a lack of any alternative vantage point from which the individual can see the self and, (d) limited detachment (the ability to meta-

think, or think about one's thoughts). In positions 2 and 3 the individual sees the self primarily "through the eyes of others". Because of these characteristics students were initially divided into small homogeneous groups along the lines of Myers-Briggs Temperament Types (NF, SP, SF, NT). This was done to utilize the introjection/projection tendencies that are considered normal for this age/stage group and to encourage the "reflection" to be as accurate as possible.

The Myers-Briggs Type Inventory (MBTI) was used to determine homogeneity because it is generally perceived as a non-threatening psychological inventory. It also appears to have a substantial amount of research support. In addition, there appears to be conceptual links between the cognitive-developmental framework offered by Perry and temperament type and learning styles as defined by the MBTI (Bissiri, 1971). This linkage was substantiated in a study at the University of Maryland by an analysis of stage/style interactions in cognitive development (Moore. 1985). The study revealed obvious overlaps between the two frameworks. Although the development and evaluation of this course was primarily based on Perry's notion of cognitive development, the use of small homogeneous groups consisting of MBTI temperament types constituted a philosophical acceptance of the importance of temperament type/learning style within the learning process.

The MBTI was also utilized because of its ability to help students eventually link individual value structure to career environments. The linkage of MBTI Temperament Types to underlying values representative of those Types, and subsequently, to specific career environments, has also been supported in the research (Moore, 1985).

Another important rationale for using small, homogeneous MBTI groups was to provide students with sufficient support and encouragement as they confronted critical existential and developmental issues. The movement from self-consciousness to self-awareness can be a frightening and isolating experience. For Perry (1970), a crucial developmental need of students negotiating the intellectual maturation process is a sense of community -- a feeling that they are not negotiating this journey alone. It was believed that the clarification/articulation potential of the small-group writing process, and use of fantasy as a way of approaching the "subject matter" of career, would create an environment where detached, in-depth, and non-threatening self exploration could be accomplished. According to Perry (1970), it is the lack of detachment in students possessing cognitive structures representative of positions 2 and 3 that inhibits critical thinking, self-awareness, and committed choice. For Perry, quality decisions (choice with commitment) can be accomplished only to the extent that

these characteristics are possessed by the decision maker; these characteristics are normally representative of the higher levels of cognitive structure that allow the en- visionment of a plurality of contexts. In other words. to observe a contemplated decision and its context one would require an alternate context in which to stand and students in cognitive positions of between 2 and 3 normally do not posses this "alternate context" (Perry, 1970).

The development of detached, "meta-thinking" in the individual, then, is seen as critical in expanding awareness of self and environment to the point where several perspec- tives or options can be seen as viable. If "truth" about self or career environment can be seen as relative and dependent on context, then the possibility of doubt exists. Doubting, for Perry (1970), precedes the qualitative weigh- ing of doubt with hope, of self and environment, and what the individual truly believes. Perry views committed choice as a function of the eventual realization that "choosing" requires a somewhat arbitrary faith, and a willingness to temporarily suspend the disbelief born of the ability to view oneself and one's environment from a multitude of perspectives (Perry, 1970).

In order to facilitate the realizations essential to committed choice, writing and fantasy were used to encourage students towards eventual ownership of the values represen-

tative of their fantasies. However, at this cognitive level (between positions 2 and 3), it was hypothesized that students could portend the imminence of doubt, but not, as yet, be able to see any possibility beyond it. As a result, it was believed that students would likely fight any imposition or exhortation to explore a multitude of self/environment perspectives. It was likely that, without support, students would view such exhortations as a threat to integrity. This would likely elicit a return to narrow-focus blockage that offers the illusion of safety. For freshman students, this blockage is typically stated as "I know what I'm going to do". It was hypothesized that if students were not "fortunate" enough to posses these likely "career introjections", there would be a tendency to shut down awareness completely, or in the case of an extreme response, lapse into a somewhat hopeless lassitude.

In summary, using fantasy was viewed as a non-threatening method of blocking instincts for narrow focus and relative safety by keeping the exploratory process somewhat detached from the individual. This potentiated the possibility of greater exploration of alternative self and career contexts. Using small groups of homogeneous MBTI Temperament Types was viewed as a way of increasing detachment and keeping the fantasy images within the confines of value structures representative of MBTI type. The small group

process itself was viewed as an excellent method of facili-
tating imaginative rumination by catering to the social and
"belonging" concerns of this age/stage group.

Subsequent to identifying value patterns in student
fantasy essays, a linking with values representative of
specific Myers-Briggs Temperament Types was attempted.
Because students had produced these value "images" them-
selves it was believed that "ownership" would be more
readily accepted and perceived as not just the imposition of
a meaningless external structure. It was hypothesized that
the extent students perceived these value patterns as
emanating from the self determined the extent that the
structure provided by the MBTI, as a way of clarifying and
organizing those values, could be viewed as a useful experi-
ence. Showing students the relationship between their own
articulated values and their tested MBTI Types would hope-
fully facilitate the use and acceptance of the MBTI as a
way of linking personal values to occupational environments.
The linkage of MBTI type to the Department of Labor's 12
Worker Trait Groups was developed later in the course.

In conclusion, the encouragement of fantasy through
writing was viewed as a way of supporting the normal process
of human career development, and a viable method of facili-
tating further growth. "With encouragement a person is
capable of imagining himself enacting many of the situations

he is considering entering. An individual can assess to a considerable degree, if so inclined, the experience he imagines in the interactions required by the situation. In this manner the individual can develop fairly accurate specifications of the needed premises of a particular situation" (Tiedeman & O'Hare, 1963, p.42).

APPENDIX G


Course Syllabus for

Writing for Self Assessment and Career Planning (WSACP)

Integration

of

English 111/Career Development Components

SYLLABUS

WRITING FOR SELF-ASSESSMENT AND CAREER PLANNING


Diane Thompson, English 111
Michael Bobolia, General 100
Fall, 1987


Introduction


This is the first of a series of three courses in which
you will develop your skills as a writer.   In  this special
section of  English 111 you will focus on writing to explore
your own values and aptitudes, working along with  a special
section of  Orientation to help you get a better idea of who
you are, what you  are doing  in college  and what  kinds of
goals might suit you best.

Why   are   we   combining   a   writing   course   with   a
self-assessment course?   Writing  is  a  powerful  tool for
self-discovery,  but  self-knowledge  is  also  the basis of
much good writing.   Further,  as  you  discover  more about
yourself,  you  will  also  discover more about differences,
about how others are different from you, and this is crucial
for writing,  since writing  is different  for other people.
You will begin to see how your writing  stems from  your own
self and  values, but must reach out to many different kinds
of people, with other feelings and values and ideas.

We will start by getting to know one another and learning a very little about how to use the word processors. I assure you this is not a course in word processing or computers. You will learn only a few commands, enough to type and edit text, no more. If you want more you can read the manual or take a course in word processing. Nor is this a course in typing. Even if you have never touched a typewriter, don't worry. You can make as many mistakes as you please. The whole point of using word processors is that they make text incredibly easy to change and fix up. The network is a new addition to our writing program. It will help you to develop fluency in writing, by writing conversations, much like the talking you all do so easily. Although fluency is not the same as good writing, it is a foundation for developing good writing. The network will also help you to develop a sense of writing for a real audience.

All papers must be turned in as computer printout, and they must be also turned in on your disk, which I will copy to my disk files. I will keep a backup of your files, so that if you accidently erase any, I will be able to restore them for you. I will collect one of your disks after the final exam, and will return it to you after I have copied the final onto my disk files. You will also learn to back up your own disk, to help prevent loss of text material.

There are computer labs open in 334 and 319 at various hours which you can use for writing your papers outside of class. Plan on spending some extra time on campus to do this. It will pay off with better, clearer papers.

You will be graded on the quality of your writing, the amount of improvement your writing shows during the quarter, and your willingness to participate in class exercises and discussions. At times you will be asked to read your writing aloud. This can be very uncomfortable at first, since it feels as if everyone is hearing every spelling error and glitch in your paper. In fact, people mostly hear only you speaking, which sounds to them remarkably like hearing themselves speak, only it is more interesting, since they don't know in advance what will be said. I will ask you to do this, even though it is uncomfortable at first, because it is very helpful to you as a writer -- you develop a sense of writing for other people, not just for that odd monstrosity, your English teacher. So, please bear with me on this; it will become more painless as we proceed.

I have assigned the Harbrace College Handbook as a reference aid for grammar. However, since this is a class in composition, not grammar, if you know that your grammar is particularly weak, you should consider transferring immediately into Verbal Studies (001).

Attendance: I expect you to attend all meetings of the class, and come prepared, so that you can participate in the scheduled class activities.

Withdrawal: Be warned that if you stop attending, I will not drop you from the class roll with a W. I only do that for people who never have attended even one session. Once you come, it is up to you to withdraw. Otherwise, if you decide to stop attending, but do not withdraw, you will receive a grade of F for the quarter.

Late Papers: I will not accept any papers after the last meeting of the class.

Class Participation: Includes turning in work on time, attending all sessions, participating in classroom activities, preparing revisions when I suggest them, and having papers ready to share with the class when required.

Grading:

    60% - three individual essays
    10% - graded group writing
    10% - 20 journal entries (about 10 minutes each)
    15% - Final Revised Essay written in class during
          two sessions
    5% - evaluation by your group of your
          participation


Revisions: If you wish to completely revise and rewrite any paper, I will be happy to regrade it, so long as you turn it in before the last class meeting. To be regraded, a paper must show substantial revisions, as well as evidence of using Harbrace to make the corrections I have indicated.

You also must turn in both the original graded paper and the revision, so that I can see the changes you have made. The new grade will replace the old grade.

Journal Entries: you will write approximately twice a week for ten minutes each time on specific topics; this, and all other written assignments will be saved and turned in at the end of the Quarter; the twenty assigned Journal entries will be 10% of your final grade. Do not worry about spelling, punctuation or fancy handwriting in these Journal entries. Just write for ten minutes to get your ideas on paper. If you do all twenty and each is about a page or so, and all deal with the assigned topics, you will get an A on your journal; if you have all twenty and some are very brief or do not respond to the assigned topic, but most are a page or so and on topic, you will get a B; if many of the entries are brief, or not on topic, you will get a C; if any entries are missing, you will get an F.

Required Materials

1. Two 5 1/4 inch, double sided, double density floppy disks

2. Hodges' Harbrace College Handbook

3. A paper folder for your Journal

Syllabus

Wed, Sept 30 :

Michael and Diane: Introduction to collaborative nature of course.

Freshman Composition:

1. Hand out syllabus for writing course;

2. Explain supplies needed, especially two floppy disks, which must be brought in next Monday, Oct. 5;

3. Explain rules for grading; rewrites.

4. Permission forms for course research

Career assessment:

1. Orientation Requirements

2. Introduce Concept of Career and Career Theme

3. Activity B: what makes up a career? Select 2 quote about work/write your "Personal Definition of Work and Career." Due Friday, Oct. 9. (first Orientation Requirement)

4. Meyers Briggs test due Wed., Oct. 7 (second Orientation Requirement)

Fri., Oct. 1:

Composition:

1. Start Journal entries (ten minutes each)

(1) "How I decide if a paper is ready to turn in"

(2) "What makes a paper good"

(3) "How to revise a paper"


Career Assessment:

1. Introduce/Assign "Biography of a Working Person" essay. Due Wed., October 21 (see Oct. 14 for details)

2. Take Strong Campbell in class (30 min)


Week 1


Mon. Oct. 5: start on computers with small groups at each terminal, discussing career themes.

Journal entry: (4) "How I feel about using computers"
Wed. Oct. 7: read Handout, "Psychological Needs," and write Journal entry: (5) "One of my psychological needs." Continue Activity B, "Personal Definition of Work and Career." Due Friday, Oct. 9.


Fri. Oct. 9: Michael - Meyers Briggs due. Career worksheet. Discuss writing on Career Theme. Activity B writing assignment due. Activity C: assign students to Myers Briggs Groups; Assign Activity D (revision of "Personal Definition of Work and Career") as homework due Fri., Oct. 24.

Week 2

Mon. Oct. 12: Format student disks with Fantasy Character exercise on them. Explain how to back up a disk; give out word-processor instruction sheets. Michael will have divided the class into four Meyers Briggs groups. I will have four group disks of my own prepared so the groups can do this exercise first.

Journal entry: (6) "How I feel about working in a group"

Wed. Oct. 14: Start developing Biography of a Working Person Essay: select someone from your own family, or a close family friend. Interview that person, asking her (or him) to tell you what she has done to earn money throughout her life, and how she has felt about what she has done. Get as many specific details as you can, such as: training and/or education for the job; hours worked; salary; type of work; treatment by bosses (or no bosses, if that is the case; she may have stayed home and raised children, or been a lawyer and self-employed); pension and benefits, if any; satisfaction; status, and so on. Take notes, or use a tape recorder so that you get all the details and don't forget them. Then write this up into an essay of about 500 words. It will be due next Wed. Oct. 21.

Journal entry: (7) "Somebody I admire"

Fri. Oct. 16: finish group Fantasy Character exercise; print out copies for each member, and start group writing of Fantasy Character Essay; each group will work at a computer terminal using group disks.

Week 3

Mon. Oct. 19: Work in class on Group Fantasy Character Essay.

Wed. Oct. 21: Biography Essay due; share and discuss ideas about how work affects a person's life.

Journal entry: (9) "How I expect work to affect my life."

Fri. Oct. 23: Work in class on Group Fantasy Character Essay. Groups read and discuss their draft essays. Now double the length, and do not add on at the beginning or end. Add details about your character's life style. Refer to your worksheets for help on this. Activity D due; discuss (20 min).

Week 4

Mon. Oct. 26: Finish Group Fantasy Character Essay and turn in today.

Wed. Oct. 28:    Individuals do worksheets for their own fantasy characters;  then write  an essay describing one day in the life of your character.  Try to make  it an interesting, even exciting, yet  typical day.   Drafts  will be due next Mon. Nov. 2.

Fri. Oct. 30:  Michael  introduce  (1)  Concept:  Values and Needs;  (may  want to  include discussion  of interviews done for Biography Essay).   (2) Activity C -- understanding Myers Briggs types.

Week 5

Mon. Nov.  2: Read  and discuss drafts of Individual Fantasy Character Essay.  Suggest  ways  to  develop  this  essay by adding detail, actions, descriptions, etc.

Wed. Nov. 4: Work on Individual Fantasy Character Essay.

Fri. Nov.  6: Michael  - introduce  Interests Concept; start Activity  I:  Apply  Interests  to  areas  of  occupations, education, civics and community, home and family.
Concept II:  Activities D  (intro to 12 worker trait groups) and E (relating MBTI to 66 worker trait groups).

Week 6

Mon. Nov. 9: Individual Fantasy Character Essay due.  Read and discuss content.

Wed. Nov. 11: Work in M/B groups;

Journal entry: (10) "What do I do when I think?" Discuss being good at things; what can we do well; what is hard for us?  Interests Worksheet.  Hands, eyes, feet, words, pictures, voices, courage, etc.

Journal entry: (11) "Something I'm good at"

Fri. Nov. 13:  Michael - Concept III: Activities B, C, D, E, F and G.

Week 7

Mon. Nov. 16:

Journal entry: (12) "Something I like to do"
Start discussing interests.  Assign Interests Essay: pick something that you find very interesting; it can be a career, a girl or boy friend, a friend, a car, a kitten, a trip to Alaska, whatever grabs your interest. Find out more about it.  Use the library, or interviews (if it is a person).  Then write up a draft describing this object of

your interest in as much detail as possible. Draft due next Monday.

Wed. Nov. 18: Work on Interests Essay

Fri. Nov. 20: Michael - Start Concept IV: Activities A and B (Aptitudes)

Week 8:

Mon. Nov. 23: Interests Essay draft due. Read and discuss ways of developing.

Wed. Nov. 25: Thanksgiving Holiday.

Fri. Nov. 27: Thanksgiving Holiday.

Week 9

Mon. Nov. 30: Interests Essay due. Read and discuss.
    Journal entry: (13) "What I'm learning about myself"

Wed. Dec. 2: Start Self-Assessment Essay. Work in groups; each group will try to describe itself, and how it is different from the other groups. Each group should try to

define its interests, apptitudes, values and job preferences
and explain these to the other groups. It is not always easy
to explain yourself to someone who is different, so notice
what seems to work best. Then each group will write a short
description of itself.

Journal entry (14) "How I feel about working with my
group"

Fri. Dec. 4: Finish Group Self-Assessment Essay; share and
discuss.

Journal entry: (15) "How and why I've learned to
love/hate computers"

Week 10

Mon. Dec. 7: Start Individual Self-Assessment Essay.

Wed. Dec. 9: Work on Individual Self-Assessment Essays.
Journal entry: "Collaboration: is it the way I want to
work?"

Fri. Dec. 11: Michael; Individual Self-Assessment Essays due
in draft form to share and discuss (you will revise these
during the final exam).

Journal Entry: (17) "What have I learned?"

Group evaluations of members' participation: scale of 1 to 5 on attendance, cooperation, contributions. This will make up 5% of each person's final grade.


Week 11


Mon. Dec. 14: three Journal entries:

    (18) "How I decide if a paper is ready to turn in"

    (19) "What makes a paper good"

    (20) "How to revise a paper"


Final Exam as Scheduled: you will rewrite your Individual Self-Assessment Essay to make it as complete and well-written as possible.


All Classes and Exams over Fri. Dec. 18.